

“Heard you got a great pandemic plan, would you mind sharing it?”: COVID-19 Pandemic Planning and Response in Local Governments in British Columbia

By

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Planning and Response in Local Governments in British Columbia

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Abstract

The COVID-19 pandemic has pressured governments to plan and implement policies to protect their citizens and economies. In British Columbia (B.C.), all local governments needed to plan and respond to the pandemic emergency to some degree. However, due to the variations in population, region, and resource capacity, there may be a number of discrepancies between local governments. Using key informant interviews with emergency management staff from local governments across B.C., this thesis aims to identify how local governments in B.C. used pandemic planning documents to develop policies to respond to the COVID-19 pandemic. The analysis revealed that the majority of participants viewed pandemic planning documents as not critical to the successful implementation of policies. The analysis also identified what the participants believed worked well and did not work well when planning and responding to the pandemic with respect to collaboration, communication, staff impacts, digital infrastructure, and financial impacts. The thesis concludes by recommending that local governments develop a flexible plan, establish collaborative networks with target groups, create communication strategies with higher levels of government, and regularly review and update digital infrastructure.

Keywords: pandemic planning; pandemic response; local government; COVID-19; pandemic; emergency management

Table of Contents

Title Page	i
Supervisory Committee	ii
Abstract	iii
Table of Contents	iv
Chapter 1: Introduction	1
1.1 Purpose Statement	1
1.2 Problem Statement	1
1.3 Background	1
1.4 Significance of Study	3
1.5 Research Questions	4
1.6 Key Terms	4
1.7 Scope	5
1.8 Structure of Thesis	5
Chapter 2: Literature Review	6
2.1 Introduction	6
2.2 Literature Retrieval Methods	7
2.3 Foundational Concepts	7
2.4 Literature Review Themes	7
2.5 Summary	20
2.6 Conceptual Framework	20
Chapter 4: Methodology and Methods	22
4.1 Methodology	22
4.2 Methods	22
4.3 Data Analysis	25
4.4 Strengths and Limitations	25
Chapter 5: Interview Findings	27
5.1 Main Themes	27
5.2 Summary	47

5.3 Revisiting the Conceptual Framework	48
Chapter 6: Discussion and Analysis	50
6.1 Introduction	50
6.2 Main Themes	51
6.3 Summary	61
6.4 Limitations of Analysis & Further Research.....	61
Chapter 7: Recommendations & Conclusion.....	63
7.1 Introduction	63
7.2 Recommendations	63
7.3 Final Thoughts.....	66
References.....	67
Appendices.....	73
Appendix A.....	74
Appendix B	76
Appendix C	78
Appendix D.....	82

Chapter 1: Introduction

1.1 Purpose Statement

This thesis aims to identify how local governments in British Columbia (B.C.) used pandemic planning documents to develop policies to respond to the COVID-19 pandemic. This thesis also seeks to provide recommendations to local governments on how to improve pandemic planning and response policies for future pandemic emergencies.

1.2 Problem Statement

All local governments in B.C. needed to respond to the COVID-19 pandemic to some degree, from changing policies to adhering to provincial health orders (e.g., capacity limits for public indoor spaces) or creating new policies that provide a specific benefit to their community (which will be explored later in this thesis). Since local governments in B.C. vary in size, region, as well as physical and fiscal capacity, discrepancies may arise between the quality and content of each pandemic planning document and their corresponding response to the COVID-19 pandemic. These discrepancies could lead to an unsuccessful or difficult implementation of policies for a select group of local governments during a pandemic emergency, which can have severe consequences for community members and the local economy.

1.3 Background

This thesis addresses an ongoing problem that continues to affect the global community in numerous ways. On January 30, 2020, the World Health Organization (WHO) declared an international health emergency in response to a new virus known as COVID-19; an infectious disease from the coronavirus family that began spreading in Wuhan, China, in December 2019 (WHO, 2021). The virus spreads through tiny droplets expelled from an infected person's nose or mouth onto surfaces or other individuals (WHO, 2021). Thus far, there have been approximately 525 million confirmed cases and 6.2 million confirmed deaths worldwide (WHO, 2022). In 2021, a vaccine was made available to combat COVID-19 (WHO, 2022). Approximately 11.8 million vaccine doses have been administered worldwide (WHO, 2022).

Following the WHO declaration in January 2020, governments worldwide were tasked with formulating and implementing policies to address the COVID-19 pandemic. While this virus strain is new, a pandemic emergency is not new to governments. There have been multiple pandemics throughout history that have affected Canada and other parts of the world. Some prominent examples include the "Spanish Flu" in 1918, the "SARS outbreak" in 2002, and the "Swine Flu" (H1N1) in 2009 (CCOHS, 2020). These pandemics have forced governments to create policies to prevent the spread of viruses and to protect citizens and the economy. These previous incidents and the research that followed (Fineberg, 2014; Greenberger, 2018; Jester et al., 2018; Rosner, 2010) stress the importance of having appropriate and comprehensive emergency management frameworks in place to help address a future pandemic response.

In Canada, there have been approximately 3.8 million confirmed COVID-19 cases and 40.7 thousand deaths (WHO, 2022). Since the vaccine was made available, 82.7 million doses have been administered (WHO, 2022). Before the COVID-19 pandemic, the Government of Canada had one primary national pandemic preparedness planning document available. This document is known as the “Canadian Pandemic Influence Preparedness: Planning Guidance for the Health Sector,” which was initially drafted in 2006 but has received multiple updates, including the most recent update from 2018 (PHAC, 2018). The purpose of this document is to:

provide planning guidance for the health sector for pan-Canadian preparedness and response, in order to achieve Canada’s pandemic goals: first, to minimize serious illness and overall deaths, and second to minimize societal disruption among Canadians as a result of an influenza pandemic (PHAC, 2018, p. 7).

The Government of Canada has adapted this plan to address COVID-19 specifically in a different document aimed at providing guidance for the federal/provincial/territorial health sector as well as regional and local health authorities, health professional associations, and others involved in the delivery of healthcare (PHAC, 2021). During the pandemic emergency, the Government of Canada also released a COVID-19 economic response plan to support people, businesses, and organizations facing financial hardships related to the pandemic (DFC, 2020).

The Government of Canada created numerous response policies to help limit the impact of the COVID-19 pandemic. The federal government supported provincial and territorial governments with contact training, testing assistance, laboratory services, and outbreak management as requested (Government of Canada, 2021a). The Government of Canada also provided more economic and financial support than any other level of government, with the most notable support being the Canadian Emergency Response Benefit which paid over \$81.6 billion to individuals unable to work because of the pandemic (Government of Canada, 2021b). Other response policies include implementing travel restrictions for individuals entering Canada, vaccine procurement and distribution to provinces, public education campaigns on safe practices during a pandemic, and the deployment of the military to support long-term care facilities and deliver food and supplies to northern communities (Government of Canada, 2021a). The planning documents prepared by the Government of Canada have supported many of these policies.

The Government of B.C., like other provincial governments across Canada, have also developed its own pandemic plans and response policies to address the COVID-19 pandemic. Thus far, there have been approximately 370 thousand confirmed cases and 3.4 thousand confirmed deaths in B.C. (BCDC, 2022). Regarding vaccines, there have been approximately 11.7 million doses administered to eligible British Columbians (BCDC, 2022). The Government of B.C. has multiple documents available under their “British Columbia’s Pandemic Influenza Response Plan” from 2012 (Government of British Columbia, 2012). The Government of B.C. prepared COVID-19 specific planning materials including, their “BC Pandemic COVID-19

Response Plan” and “Pandemic Provincial Coordination Response Plan” (Government of British Columbia, 2020a). Both of these materials include elements and complement the existing documents from 2012.

The response policies employed by the Government of B.C. support the four core areas of the BC Pandemic COVID-19 Response Plan – protect the population, protect vulnerable citizens, protect health workers, and support health-care capacity (Government of British Columbia, 2020b). Most provinces, including B.C. during the COVID-19 pandemic, implemented compulsory mask-wearing in public places and limitations on public and private gatherings to reduce infections and hospitalizations (Government of B.C., 2022a). The Government of B.C. also employed other policies, including limiting the sales of liquor at certain hours in restaurants and stores, restricting voluntary travel between health regions, and the implementing of vaccine requirements to enter many public spaces such as restaurants, museums, and theatres (Government of British Columbia, 2022a). Although the federal government provided the majority of financial support during the pandemic, the Government of B.C. provided some benefits, including the BC Emergency Benefit for Workers and the COVID-19 Relief Grant for businesses (Government of British Columbia, 2022b). Concerning vaccines, once the federal government had procured the vaccines, the Government of B.C. distributed vaccines in stages, beginning with priority groups such as frontline workers and the senior population (Office of the Premier, 2021).

In addition to the pandemic planning documents available at the federal and provincial levels, local governments have the capacity to prepare emergency planning documents to address a pandemic response in their respective communities. Under section 6 of the *Emergency Program Act*, local governments in B.C. are required to prepare emergency planning and response documents; however, there are no provincial requirements on the content of these plans (*Emergency Program Act*, 1996). The Government of B.C. provides a general emergency management planning guide for all municipalities, including an appendix for pandemic planning, to assist with developing preparedness plans (Government of British Columbia, 2021). Although the provincial government provides supporting documents to guide the planning process, local governments have the authority to dictate the types of planning documents and the level of detail in each plan.

1.4 Significance of Study

Emergency management has increasingly become a topic of interest as individuals and governments continue to combat the effects of climate change globally. In 2021, B.C. experienced a record-breaking heat dome that killed at least 595 people, a wildfire season that forced at least 50,000 evacuations, and unprecedented floods that damaged major transportation routes (Little, 2021). In addition to these events, the COVID-19 pandemic was in its second year and still required attention from individuals and governments. These events suggest that fulsome

emergency plans that address all risks are necessary to ensure a safe and stable future for citizens.

Despite a general need for increased emergency planning efforts for all risks, pandemic planning has traditionally been understudied, even though humans have been exposed to pandemics for centuries (Waltner-Toews, 2020). Anthropogenic causes such as climate change, urbanization, globalization, and poverty have exacerbated the spread of viruses throughout history (Waltner-Toews, 2020). As these issues persist globally, there will continue to be pandemics. Therefore, successful pandemic planning and response will be critical to mitigating negative societal impacts when responding to future pandemics.

Lastly, even though studies on local government COVID-19 planning and response have been emerging in other countries (Afonso, 2021; Armstrong & Lucas, 2020; Dzigbede et al., 2020; Kirilin, 2020; Liu & Saltman, 2020; Liu et al., 2021; MacIntyre et al., 2021; Maher et al., 2020; Switzer et al., 2020; Wilson et al., 2020; Yilmaz & Boex, 2021), there are no studies on this topic in the Canadian context. This thesis seeks to contribute to the field of COVID-19 literature by identifying the current statement of pandemic planning and response as well as gaps that local governments should address before the next pandemic emergency.

1.5 Research Questions

This thesis addresses the primary research question: how did pandemic planning documents influence how local governments in B.C. responded to the COVID-19 pandemic?

Additional research questions explored in the thesis were:

- What is the current state of pandemic planning in B.C.?
- What worked well related to pandemic planning and response?
- What did not work well related to pandemic planning and response?
- Are there any differences based on the regional location of a municipality?
- What improvements could be made to pandemic planning and response in B.C.?

1.6 Key Terms

In Canada, there are various types of governments including local governments, provincial/territorial governments, the federal/national government, and Indigenous governments. Each government has distinct and overlapping jurisdictional powers to address different policy problems impacting Canadians. Local governments in B.C. include municipalities and regional districts and create policies regarding services, land-use planning, emergency management, and other community-specific areas (Government of British Columbia, 2022c). During an emergency, local governments are typically the first level of government to

immediately respond; therefore, they have a significant role in the emergency management framework (Somers & Svara, 2009).

Emergency managers and academics recognize four stages of emergency management. These stages are preparedness, mitigation, response, and recovery (Waugh, 1998). These stages will be discussed further in Chapter 2.3 [Foundational Concepts]; however, it is important to note that pandemic planning is an activity conducted in the preparedness stage and COVID-19 policy implementation occurs in the response stage (Waugh, 1998). Pandemic planning includes creating various formal plans that assist local governments in preparing and responding to a pandemic, which includes, but is not limited to, pandemic response plans, business continuity plans, and workplace safety plans (Government of British Columbia, 2020a). COVID-19 response policies include policies to mitigate the spread of coronavirus, which includes, but is not limited to, facility closures, social distancing requirements, and quarantine measures (Government of British Columbia, 2022a).

1.7 Scope

This thesis will only be examining municipalities, such as villages, towns, and cities, in B.C. The thesis will exclude regional districts as a board of directors governs this body rather than a council. This thesis will also exclude band governments from Indigenous communities since these governments have a separate health authority in B.C. (First Nations Health Authority) and are primarily under federal jurisdiction.

This thesis will also only focus on the preparedness and response stage of four-stage emergency management cycle. The mitigation stage focuses on long-term structural measures implemented between emergencies, and the recovery stage occurs once the risk from the emergency has subsided (Waugh, 1998). Since this study was conducted during the response stage, the data collected from participants focused on the stages that they had already experienced rather than their expectations for future stages.

1.8 Structure of Thesis

The next chapter of this thesis reviews existing literature on natural disaster and pandemic emergency planning and response organized into themes and concludes with the conceptual framework that guided the research. The following chapter will outline the methodology and data collection methods used for the thesis. The next chapter will identify the findings from the interviews organized into themes similar to those used in the literature review. The following chapter will discuss how these themes to answer the research questions. The thesis will conclude with recommendations on how local governments can improve their pandemic planning and response efforts for the next pandemic emergency.

Chapter 2: Literature Review

This chapter evaluates the existing literature relevant to pandemic emergency planning and response by dividing the information into common themes. These themes provide an overview of common challenges and beliefs in this field of emergency management. This literature review will inform the results of this study in the discussion chapter.

2.1 Introduction

Emergency management is a large field of study dominated by discussions about preparing for, responding to, and recovering from natural disaster emergencies. Before the COVID-19 pandemic, there was limited academic literature (Charnia & Tsuji, 2011; Doxtator et al., 2004) on pandemic preparedness and response planning by governments in the Canadian context. The majority of literature on this topic before the COVID-19 pandemic derives from international studies (Azziz-Baumgartner et al., 2009; Braunack-Mayer et al., 2010; Danforth et al., 2010; Fineberg, 2014; French, 2011; French & Raymond, 2009; Greenberger, 2018; Hu et al., 2007; Jester et al., 2018; Nicoll et al., 2012; Rogers et al., 2009); however, only four studies (Danforth et al., 2010; Doxtator et al., 2004; French, 2011; French & Raymond, 2009) specifically discuss local government pandemic preparedness planning. The inclusion of these studies alone fails to frame the intricacies of local government emergency planning and response.

This literature review also includes studies on local government emergency planning and response to natural disasters (Col, 2007; Harris et al., 2011; Henstra, 2010; Kusumasari et al., 2010; McGuire & Schneck, 2010; Ollerenshaw et al., 2016; Sinclair et al., 2012; Somers & Svara, 2009; Tselios & Tompkins, 2017). Although pandemic planning and response has additional nuances that can contrast natural disaster emergency management, the similarities illustrate local government preparedness and response planning in a larger context.

Recently, there have been numerous articles published regarding pandemic planning and response in reaction to the ongoing COVID-19 pandemic (Afonso, 2021; Armstrong & Lucas, 2020; Dzigbede et al., 2020; Haffajee & Mello, 2020; Hughes et al., 2021; Kirlin, 2020; Liu et al., 2021; Liu & Saltman, 2020; MacIntyre et al., 2021; Maher et al., 2020; Shearer et al., 2020; Switzer et al., 2020; Webster, 2020; Wilson et al., 2020; Yilmaz & Boex, 2021). Despite the emergence of literature on COVID-19 planning and response, there remain to be no studies on this topic focusing on local governments in Canada.

The collection of previous research on pandemic planning and response prior to the COVID-19 pandemic, the research regarding natural disaster planning and response for local governments, and emerging research on pandemic planning and response during COVID-19 creates a broad view of themes related to local government pandemic planning and response.

2.2 Literature Retrieval Methods

The University of Victoria online library databases were used for this literature review. The key academic databases accessed include JSTOR, Google Scholar, Academic Search Premier (EBSCO), Taylor & Francis Journals Online, Springer eBooks, Sage Knowledge eBooks, Cambridge Journals Online, and Emerald Journals. Various search terms were used to locate articles relevant to the research topic. The most prominent search terms include “pandemic,” “local (or municipal) government,” “government,” “emergency,” “plan,” “preparedness,” and “response.” Specific virus strains such as “H1N1,” “SARS,” and “COVID-19” were also used as search terms. The literature review contains peer-reviewed academic articles published between 2003-2021.

2.3 Foundational Concepts

Prior to the 1970s, emergency management was relatively reactionary and was primarily fire departments responding to fires in their respective communities (Waugh, 1998). There were no prevention efforts beyond construction regulation through building standards (Waugh, 1998). In the 1970s, the National Governors’ Association in the U.S. developed the four-phase emergency management model that is referenced throughout emergency management literature today (Waugh, 1998). As mentioned earlier, the four phases are preparedness, mitigation, response, and recovery (Waugh, 1998). *Preparedness* policies involve anticipatory measures to increase a community’s capability to respond effectively to emergencies (Waugh, 1998). *Mitigation* policies are structural or legislative changes aimed at preventing or reducing the impact of hazards (Waugh, 1998). *Response* policies are adopted to strengthen operations and assist community members during emergencies (Waugh, 1998). *Recovery* policies aim at restoring and rehabilitating the community after an emergency (Waugh, 1998). This literature review will focus primarily on the preparedness and response phases of emergency management.

2.4 Literature Review Themes

Role of Local Governments

A significant theme in emergency management literature is defining the role of local governments when planning and responding to an emergency while existing in a broader federal scheme. The delegation of roles between government levels is complex, and various studies have advocated for different approaches. Some studies on pandemic planning and response (Charania & Tsuji, 2012; Hu et al., 2007; Nicoll et al., 2012) advocate for increased intervention from national governments to provide unified policy guidance and necessary funding to local governments. For example, Hu et al. (2007) analyzed pandemic planning documents from sixty-six municipal governments in China and found that the plans would not satisfactorily respond to a pandemic emergency. They suggest that the quality would be greatly improved if the national government would develop required procedures for the planning process and implement regulations mandating local governments to review and update their plans (Hu et al., 2007).

In contrast, Yilmaz & Boex (2021) advocate for a decentralized approach, where local governments have greater jurisdictional authority and capabilities to plan and respond to specific problems that arise during a pandemic emergency than a national or state government. The authors identify four areas where local governments could effectively address a pandemic. These areas include the improvement of public health service delivery (e.g., procurement of personal protective equipment), the prevention and tracking of cases (e.g., enforcement of public health orders), the mitigation of unintentional impacts on existing local public services (e.g., protection of water treatment facilities), and providing support for social and economic relief activities (e.g., providing spaces to protect the vulnerable population) (Yilmaz & Boex, 2021).

Similar to the perspective of Yilmaz & Boex (2021), Ollerenshaw et al. (2016) and Tselios & Tompkins's (2017) studies on planning and responding to natural disaster emergencies recommend more decentralized government structures as local governments have a greater understanding of community dynamics and needs. Other natural disaster studies (Col, 2007; McGuire & Schneck, 2010) have indicated a more balanced approach where state governments provide aid and support while local governments decide on immediate response actions, such as declaring a state of emergency or mandating an evacuation.

If a decentralized approach to emergency management is employed to respond to a pandemic or natural disaster emergency, the local government must have sufficient resource capabilities. Kusumasari et al. (2010) identify six key functional success factors that local governments must possess to respond to an emergency successfully. These factors include institutional, human resource, policy implementation, financial, technical, and leadership capabilities (Kusumasari et al., 2010). Henstra (2010) has also identified preparedness strategies that address these capabilities, such as hiring a full-time professional emergency manager to address human resource and leadership elements. However, studies (Harris et al., 2011; Kusumasari et al., 2010; Ollerenshaw et al., 2016) note that accessing financial and physical resources to meet all these capabilities can be extremely difficult for local governments depending on a variety of external components.

The contrasting views on the role of local governments during an emergency suggest that the approach may depend on the capabilities of each local government, the region and community affected by the emergency. Although literature on pandemic planning and response traditionally supported a more centralized approach, recent literature on COVID-19 specifically suggests that there may be a slight shift towards decentralization to respond to pandemic emergencies in the modern era.

Role of Elected Officials

Some studies (Armstrong & Lucas, 2020; Henstra, 2010; Kirlin, 2020; Somers & Svara, 2009) discuss the impact elected officials can have on emergency policy decisions. During the emergency planning stage, elected officials have the authority to determine the allocation of

financial resources to their emergency management programs. However, these programs are frequently underfunded (Henstra, 2010; Somers & Svara, 2009). This underfunding typically occurs because emergency management is not an issue that puts public pressure on elected officials to act outside of a disaster period (Henstra, 2010; Somers & Svara, 2009). Local elected officials may not be entirely to blame, as this level of government is dependent on intergovernmental transfers from higher levels of government. This federal system can negatively impact emergency program funding since the money allocated is dependent on the priorities of the national government and the grants available, which may change year to year (Somers & Svara, 2009). A successful emergency management program is contingent on having elected officials take the initiative with financial support and participate in the emergency planning process (Somers & Svara, 2009).

Some of the existing literature on pandemic planning regarding COVID-19 (Armstrong & Lucas, 2020; Kirlin, 2020) has discussed the role of elected officials in responding to the pandemic emergency. Kirlin (2020) argues that pandemic planning, specifically in the U.S., should be modified to support decisions made by elected officials rather than centralized government agencies. One recommendation made by the author is to amend pandemic plans to allow elected officials to receive the information as early as possible, potentially at the same time as public health officials receive the information (Kirlin, 2020). Another recommendation is to identify and assess various policy actions, ranging from educational resources to enforceable restrictions, and share these actions with elected officials (Kirlin, 2020). The author recognizes that elected officials in each state may choose different policy actions based on factors such as population density, the local economy, political values, or the local health information provided (Kirlin, 2020).

Armstrong & Lucas (2020) focused their study on a similar range of policy actions taken in Canada to identify what factors may have influenced more aggressive policy decisions. They found that policy aggressiveness is more related to population size and the number of cases rather than the province and political ideology (Armstrong & Lucas, 2020). Furthermore, their research found that municipalities with middling levels of conservative vote share had the most aggressive policy stances on average (Armstrong & Lucas, 2020). The Armstrong & Lucas (2020) study suggests that elected officials may make decisions based on population and case data, much like health officials, rather than their political values. Whereas the Kirlin (2020) study indicates that elected officials may make different decisions based on their political values when given the same information as health officials. Different political cultures in Canada versus the U.S. may attribute to these differences.

State of Existing Plans

There have been multiple studies (Azziz-Baumgartner et al., 2009; French, 2011; Hu et al., 2007; Nicoll et al., 2012) focusing on what pandemic plans are in place prior to an emergency and recommendations on how to improve plans in preparation for the next pandemic.

French (2011), Hu et al. (2007), and Nicoll et al. (2012) examined the quality of existing pandemic plans to determine weaknesses and potential areas of improvement. Nicoll et al. (2012) investigated pandemic plans from forty-three countries in the European Union against an assessment tool based on the World Health Organization's 2005 pandemic plan checklist. The assessment identified various weaknesses in preparedness and planning, such as difficulties adjusting general pandemic plans to specific requirements of a particular pandemic, inadequate regional coordination and cooperation, and confusion over pandemic definitions and phases concerning disease severity (Nicoll et al., 2012).

Instead of examining national-level pandemic plans, French (2011) and Hu et al. (2007) analyzed pandemic plans at the local level in the U.S. and China, respectively. Similar to Nicoll et al. (2012), French's (2011) and Hu et al.'s (2007) analyses found gaps in the existing planning structure. The most significant weaknesses in U.S. local pandemic plans include no reference to creating a pandemic preparedness committee and minimal to no input from the public on planning (French, 2011). In contrast, some of the gaps in local pandemic plans in China include minimal references to mutual aid and cooperation between adjacent regions, a lack of procedures and policies during the preparedness and recovery stages of a pandemic, and neglect of social relief planning such as providing food and temporary lodging and arranging psychological counselling for victims (Hu et al., 2007). These studies suggest that there are common inadequacies found in pandemic plans for local and national governments globally.

Azziz-Baumgartner et al. (2009) and Nicoll et al. (2012) provide recommendations on how government pandemic plans can be improved. Azziz-Baumgartner et al. (2009) detail the necessary sections of a pandemic plan, ensuring that critical areas of response are not overlooked during an emergency. These areas include establishing an incident management structure, testing surveillance systems, risk communication strategies, identifying mitigation measures (e.g., quarantine measures, vaccines), and ensuring business continuity for essential services (Azziz-Baumgartner et al., 2009). Nicoll et al. (2012) draw attention to similar key areas for improvement, including planning of surveillance systems, communication structures, and the management of medical countermeasures. Some recommendations for these key areas include adopting pre-defined protocols for epidemiological information gathering and sharing, creating communication channels between all stakeholders, and developing cross-jurisdictional guidance for reaching out to the vulnerable population (Nicoll et al., 2012). It is important to note that these studies focus on national pandemic plans, which slightly vary from their local government counterparts. For example, vaccine procurement plans would be a more critical issue at the national level than the local level.

These studies (Azziz-Baumgartner et al., 2009; French, 2011; Hu et al., 2007; Nicoll et al., 2012) suggest that there are common deficiencies in many pandemic plans, such as gaps in regional or intergovernmental collaboration and testing mechanisms. However, if increased attention is paid to modifying these plans, the gaps can be addressed before the next pandemic emergency to help bolster a more successful response.

Collaboration

A recurring theme in emergency planning and response literature is the emphasis on collaboration – which includes collaborating with different groups and institutions. This section of the literature review will focus on regional, intergovernmental, and community collaboration.

Regional Collaboration

Regional collaboration between local governments can occur at the planning and response stages of an emergency. Previous literature (Danforth et al., 2010; Somers & Svara, 2009; Switzer et al., 2020) encourages local governments to collaborate with neighbouring governments through approaches such as regional planning and response committees and mutual aid agreements. Switzer et al. (2020) explored strategies used by municipal utility operators in Missouri to respond to the COVID-19 pandemic and found that mutual aid agreements were considered the primary strategy employed by most operators. The authors indicate that the most significant benefits of mutual aid agreements are the increased protection of utilities in a disaster scenario, the financial reimbursements from the federal government available for those participating in the programs, and learning opportunities for operators from other jurisdictions (Switzer et al., 2020). It is important to note that in Missouri, there is a statewide non-profit service organization that coordinates mutual aid agreements, which may impact why operators prioritize this approach.

Although the research encourages regional collaboration, several authors also note there are some substantial challenges to making it successful. Some of these challenges include the underuse of organizations that facilitate mutual aid agreements (Danforth et al., 2010; Switzer et al., 2020), mutual aid agreements only existing between select departments (Danforth et al., 2011), some local politicians not recognizing the value of regional collaboration (Somers & Svara, 2009; Switzer et al., 2020), and rural local governments concerned that mutual aid agreements may take away from their limited resources (Danforth et al., 2010; Switzer et al., 2020).

Intergovernmental Collaboration

Some authors (Col, 2007; Hu et al., 2007; Somers & Svara, 2009; Yilmaz & Boex, 2021) believe that collaboration with federal and state/provincial governments can positively impact emergency planning and response efforts. However, the coordination should empower the local government to respond effectively and not result in the other levels of government handling the emergency response entirely (Somers & Svara, 2009; Yilmaz & Boex, 2021). Somers & Svara (2009) outline the standard intergovernmental collaboration structure. First, local governments are expected to handle the immediate response to an emergency which includes deploying first-responder services (Somers & Svara, 2009). State/provincial governments must coordinate and implement a comprehensive response and deploy additional resources and personnel if needed (Somers & Svara, 2009). Lastly, if the local government and state/provincial governments are

overwhelmed, then the federal government will provide additional physical and financial resources (Somers & Svara, 2009). It is important to note that a pandemic response requires a different form of intergovernmental coordination, as federal governments must handle border control and vaccine development and procurement.

According to several authors, an effective form of intergovernmental collaboration in the preparedness and mitigation stage is the implementation of legislative and regulatory frameworks by federal and state/provincial governments to guide local government emergency planning and response (Col, 2007; Hu et al., 2007; Somers & Svara, 2009; Yilmaz & Boex, 2021). Hu et al. (2007) argue that the lack of national regulations around pandemic planning in China has three negative impacts: 1) local governments may choose not to engage with all necessary stakeholders, 2) they may not regularly update their plans, and 3) may not feel enticed to practice their plans before an emergency unless they are required to do so by law. Col (2007) also conducted research on emergency planning and response in China but focused on the country's earthquake planning and response. Col (2007) argues that China's national earthquake policy played a large role in Qinlong County's successful emergency response. These findings suggest that pandemic planning and response may lag behind other emergencies in terms of priority.

Community Collaboration

There are a variety of studies (Braunack-Mayer et al., 2010; Col, 2007; Danforth et al., 2010; Doxtator et al., 2004; French, 2011; Rogers et al., 2009) that support the inclusion of community members in the emergency planning and response process. Community collaboration during emergency planning and response can have several benefits. These benefits include having non-profit or community organizations be an access point for vulnerable populations (Danforth et al., 2010), potentially greater acceptance levels of public health measures such as quarantine mandates (Braunack-Mayer et al., 2010), and a quicker mobilization of citizens at the onset of an emergency (Col, 2007).

Additionally, Braunack-Mayer et al. (2010), Danforth et al. (2010), and Doxtator et al. (2004) conducted their research using methodologies that incorporate the participation of community members (e.g., the use of deliberative forums to discuss the acceptance of potential pandemic strategies; key informant issues with community organization leaders). The use of these methods further strengthens the argument that insights from community members can be helpful when drafting or updating pandemic planning and response documents.

These three forms of collaboration are vital to successful emergency planning and response and offer different types of support that cannot be achieved by only collaborating with one group. Despite the benefits of comprehensive collaboration, it requires increased efforts at the planning stage, which may be challenging for local governments with limited capacity.

Communication

The importance of communication during a pandemic emergency is widely discussed in emergency management literature (Azziz-Baumgartner et al., 2009; Danforth et al., 2010; Doxtator et al., 2004; Dzigbede et al., 2020; French, 2011; Liu et al., 2021; Liu & Saltman, 2020; Nicoll et al., 2012; Rogers et al., 2009). Unlike other sections of this literature review, there is substantial literature on communication planning and response for a pandemic emergency. Therefore, this section of the thesis' literature review can focus on communication during a pandemic emergency and not be supplemented by literature on communication during a natural disaster emergency.

Communication Plan

The presence of a fulsome communication plan prior to a pandemic can aid in communication during a response. Various studies (Azziz-Baumgartner et al., 2009; Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Nicoll et al., 2012) have provided insights into how to develop a successful communication plan which includes identifying the communication groups and the best means of reaching them. The most common areas discussed in these articles include the use of multiple modes of communication, which includes the integration of new technology (Danforth et al., 2010; Dzigbede et al., 2020; Nicoll et al., 2012), and the importance of strategizing how to reach vulnerable populations during a time of crisis (Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Nicoll et al., 2012).

When determining the methods of communication, research (Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Liu & Saltman, 2020; Nicoll et al., 2012; Rogers et al., 2009) supports the use of many different instruments beyond the traditional use of television and newspapers. Two more recent methods of communication include the use of social media platforms and hotlines, which can provide two-way communication between the government and the public (Dzigbede et al., 2020; French, 2011; Liu & Saltman, 2020; Nicoll et al., 2012; Rogers et al., 2009). In French's (2011) study of pandemic communication plans in city governments across the U.S., one of the highest-scoring plans included ongoing maintenance of various communication sources, which include websites, hotlines, email systems, and media spokespersons. Since a pandemic can affect everyone regardless of age or socio-economic group, it is critical that all groups have the ability to access important information and resources.

Vulnerable populations, such as senior citizens and ethnic minorities, may be more difficult to reach than other demographic groups (Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Nicoll et al., 2012). Therefore, successful communication plans should address these demographic-specific issues. For example, in Danforth et al.'s (2010) study on pandemic planning in Pasco County, they found that they needed to develop new communication methods to address the needs of the large elderly population in the county. Since the elderly population is more likely to suffer from memory loss or have limited access to digital resources, the

communication plan indicates that messages should be redundant, use simple language, and be delivered by trusted organizations, such as Veteran Affairs or caretakers (Danforth et al., 2010). These studies emphasize the importance of communication plans being tailored to meet the demands of diverse populations within a community.

The components of communication plans discussed in this section are essential when preparing for a pandemic emergency. However, it is also important that communication occurs between a number of different groups, including community members, local government employees, and other governments in the region.

Community Communication

Communication with community members before and during a pandemic can lead to a more successful emergency response. Rogers et al. (2009) used a deliberative forum to engage community members on communication strategies that governments should employ when responding to a pandemic emergency. Generally, participants agreed with the approach set out in their national communication strategy; however, they indicated that they would want all information related to risk potential and the geographic locations of cases which is not included in the national plan (Rogers et al., 2009). Liu et al.'s (2021) recent study on information disclosure on the pandemic supports the sharing of both generic and detailed pandemic information to the public, as it can reduce mass panic and signal that the government understands the issue and is working to resolve it. The participants in Rogers et al.'s (2009) study also provided suggestions on how communication can be delivered to reach the widest audience. They indicated that the use of multiple experts as spokespersons through the television and websites would yield the best results (Rogers et al., 2009). However, it is important to note that this study is over a decade old and does not reflect the evolution of recent technology. Nevertheless, the study exemplifies how involving citizens in pandemic communication planning can help local governments determine what communication strategies will have the best outreach to the people in their community.

Internal Communication

Only one participant from one study (Dzigbede et al., 2020) touched on the importance of communication strategies with employees. In an interview with the assistant manager of Lone Tree, Colorado, the participant described the communication strategies they used with their employees during the COVID-19 pandemic (Dzigbede et al., 2020). These strategies include setting deadlines, speaking of actions that can be taken, supporting experimentation, and congratulating employees on being adaptable (Dzigbede et al., 2020). According to this participant, good communication with employees can lead to better communication with the public (Dzigbede et al., 2020). Lone Tree employees during the COVID-19 pandemic, collaborated with the public and businesses to develop projects aimed at COVID-19 recovery

initiatives, such as initiating a food delivery service and publicly thanking healthcare workers (Dzigbede et al., 2020).

Intergovernmental Communication

During pandemic planning and response, local governments should be communicating with other governments in surrounding jurisdictions and at the higher levels of government (Danforth et al., 2010; Liu & Saltman, 2020). Liu & Saltman (2020) identifies some of the communication failures between the Chinese national government and the Wuhan municipal government. At the onset of COVID-19 infections, the Wuhan government announced through television broadcasting that the claims made by physicians stating that they had contracted COVID-19 were false (Liu & Saltman, 2020). When national-level health experts were deployed to Wuhan to investigate, they did not communicate their findings with the national government in a timely manner, and the Wuhan government did not communicate what was occurring to the public (Liu & Saltman, 2020). The combination of the communication failures led to rapid and widespread infections of COVID-19 across Wuhan early on (Liu & Saltman, 2020).

Similarly, Danforth et al. (2010) highlight the importance of communicating between jurisdictions since viral infections do not stop at government borders. This level of communication can lead to the sharing of medical equipment and information between hospitals to address regional concerns (Danforth et al., 2010). However, Danforth et al. (2010) warn that too much regional communication can lead to people feeling apathetic to alerts and notices, leading them to be less likely to respond to requests to help. These two studies emphasize the importance of balancing intergovernmental communication strategies. It is critical that governments communicate with one another to ensure consistent and timely information between all groups affected by the pandemic, but too much communication may lead to fatigue which may further worsen a pandemic response.

All of the studies in this section of the literature review (Azziz-Baumgartner et al., 2009; Danforth et al., 2010; Doxtator et al., 2004; Dzigbede et al., 2020; French, 2011; Liu et al., 2021; Liu & Saltman, 2020; Nicoll et al., 2012; Rogers et al., 2009) emphasize the importance of communication during the planning and response stage of a pandemic emergency. However, the studies also recognize that communication strategies are complex and vary between different stakeholders and their needs.

Emergency Training & Exercises

The importance of training and exercises as a critical component of emergency planning is widely discussed in research on preparing for a natural disaster (Harris et al., 2011; Henstra, 2010; Kusumasari et al., 2010; Sinclair et al., 2012; Somers & Svara, 2009). Local government elected officials and staff who are trained in their roles during an emergency are more likely to provide effective assistance during the response (Harris et al., 2011; Henstra, 2010). Exercises can also be used to identify gaps in an emergency response plan, foster stronger working

relationships among key emergency actors, and offer an additional level of training (Henstra, 2010; Somers & Svara, 2009). Following an exercise, it is vital that local governments make the proper adjustments to the emergency plan immediately after the exercises so that the plan is ready to be used at the onset of an emergency (Henstra, 2010; Sinclair et al., 2012; Somers & Svara, 2009). For example, the evacuation plan for New Orleans during hurricane Katrina had not been tested, and during the response, there were glaring gaps regarding the evacuation of the vulnerable population in the city (Col, 2007; Somers & Svara, 2009).

When compared to literature published that discusses training and exercise in preparation for a natural disaster, there is much less available regarding a pandemic emergency. Doxtator et al. (2004) conducted a tabletop exercise in rural Ontario, which presented a group of community stakeholders with a pandemic scenario that would require a local response effort. The exercise identified critical issues with the existing pandemic plan (e.g., communication gaps, difficulty determining vaccine prioritization beyond essential workers) and provided recommendations to improve the overall response (e.g., maintaining a list of volunteers and retired essential workers, school and daycare closures) (Doxtator et al., 2004).

MacIntyre et al. (2021) conducted a similar pandemic tabletop exercise at the national level, which included government stakeholders from the U.S., United Kingdom, Australia, New Zealand, and Canada. The study utilized modern technology through live polling software that the participants used through their smartphones to make decisions and participate in the exercise (MacIntyre et al., 2021). The results of the study are similar to Doxtator et al.'s (2004) research in that the participants supported prioritizing the vaccination of healthcare workers and first responders, that the presence of social contact restrictions like facility closures was necessary, and that plans need to be in place to address absenteeism in the workforce (MacIntyre et al., 2021).

Unlike Doxtator et al.'s (2004) study, MacIntyre et al. (2021) contextualized their 2019 results with the current COVID-19 pandemic. This contextualization validated the results of the study while also identifying emerging issues that were not taken into consideration when developing the study prior to the COVID-19 pandemic. For example, the authors did not anticipate that high-income countries would lose pandemic control due to poor leadership, cultural factors, and insufficient pandemic planning like what happened in the U.S. and the U.K. during the COVID-19 pandemic (MacIntyre et al., 2021). In other words, funding, resources, and scientific expertise, which were a major focus of both studies (Doxtator et al., 2004; MacIntyre et al., 2021), do not ensure a successful pandemic response if political and cultural factors are not also considered.

Public Risk Perception

Emergency risk perceptions can pertain to both the risk perception of the public when assessing information on the disaster and the risk perception of a local government when

deciding whether to plan or respond to an emergency situation. This subsection focuses specifically on public risk perception, as it has become a growing issue during the COVID-19 pandemic (Hughes et al., 2022; Liu et al., 2021).

Public risk perception can impact the support and compliance with public health measures (Braunack-Mayer et al., 2010; Hughes et al., 2022; Somers & Svara, 2009). In Braunack-Mayer et al.'s (2010) study using deliberative forums, they found that the public may be more likely to support public health measures, such as social distancing orders if there was a high perception of risk in their region. Similarly, Hughes et al. (2022) found that individuals who believe in conspiracy theories were more likely to consider the pandemic a low-risk emergency and, therefore would be less likely to comply with public health measures. Somers & Svara (2009) indicate that basic risk management theory supports the notion that in order for people to take protective actions, they must have a perception of risk. These studies exemplify the importance of recognizing and managing public risk perception when planning and responding to a pandemic emergency.

Public risk perception can also be impacted by the volume and source of emergency information (Hughes et al., 2022; Liu et al., 2021). Liu et al.' (2021) study of local government disclosure of pandemic-related information in China identified a complex and evolving relationship between information disclosure, risk perception, and public trust in local governments. The authors found that disclosing general and detailed information reduces panic by promoting perceived prevention effectiveness but also increases panic by amplifying risk perception (Liu et al., 2021). However, high trust in local government increases perceived prevention effectiveness and lowers risk perception (Liu et al., 2021).

Both Liu et al. (2021) and Hughes et al. (2022) highlight the importance of who is sharing the information and on what platform. Social media has begun to replace traditional media platforms such as newspapers, which has impacted public risk perception. Hughes et al. (2022) indicate that conspiracy theorists who are less likely to comply with public health measures are more likely to get their information from social media while also distrusting mainstream media sources. Similarly, Liu et al. (2021) believe the increased volume of information available online has caused individuals to process information with minimal cognitive effort. These findings suggest local governments should consider the power social media can have in influencing public risk perception.

Digital Infrastructure

The importance of digital infrastructure demonstrates the subtle differences between the emergency infrastructure for a natural disaster versus a pandemic emergency. During a natural disaster emergency, there are concerns that the physical infrastructure in a community can have negative social and economic impacts. However, during a pandemic emergency, governments and other institutions rely on the digital infrastructure in place to function while minimizing the

spread of the virus successfully. Some studies on COVID-19 planning and response (Dzigbede et al., 2020; Kirlin, 2020; Webster, 2020) have discussed the importance of digital infrastructure when addressing a pandemic emergency.

After an interview with David Naylor, a Canadian pandemic control expert, Webster (2020) was able to identify some gaps in the planning and response to COVID-19. The most significant gap was the absence of national digital health infrastructure, ranging from a patient-centered telehealth scheme to an epidemic digital surveillance system (Webster, 2020). Kirlin (2020) also emphasized the importance of digital infrastructure in regard to surveillance. They argue that gaps in data and information available to decision-makers have crippled responses to COVID-19; however, these issues could be resolved by improving digital infrastructure capabilities (Kirlin, 2020). In the U.S., some of the major data issues include state jurisdiction over COVID-19 data tracking, no national notification laws requiring states to disclose information, and no consistent definition of what data and information should be collected (Kirlin, 2020). These studies suggest that both the U.S. and Canada did not have the proper digital infrastructure in place to address response inefficiencies during the COVID-19 pandemic.

At the local government level, Dzigbede et al.'s (2020) study had multiple participants state that improving digital infrastructure prior to the pandemic helped them respond quickly to changing circumstances. For example, one county government had switched workstations to using laptops prior to the pandemic, including all the required security measures for those laptops to be functional outside the office (Dzigbede et al., 2020). This decision made the transition from working in office to at home much easier, allowing the local government to continue to focus on pandemic response efforts (Dzigbede et al., 2020). Another county government was in the process of implementing an online procurement process before the pandemic, which helped employees to transition to that system quickly at the onset of the COVID-19 pandemic (Dzigbede et al., 2020). All of these studies (Dzigbede et al., 2020; Kirlin, 2020; Webster, 2020) highlight the importance of addressing digital infrastructure gaps prior to a pandemic to help bolster a better response during the emergency.

Financial Impacts

Since the beginning of the COVID-19 pandemic, there has been a growing body of literature on how local governments have shifted their financial plans to respond to the ongoing pandemic emergency (Afonso, 2021; Dzigbede et al., 2020; Maher et al., 2020; Switzer et al., 2020; Wilson et al., 2020). The discussion of financial impacts ranges from strategies employed by local governments to mitigate organizational setbacks (Afonso, 2021; Dzigbede et al., 2020; Maher et al., 2020; Switzer et al., 2020) to aid the local economy and business community (Dzigbede et al., 2020; Wilson et al., 2020). Although financial planning is not explicitly included in the emergency planning process, these studies highlight the importance of financial planning when responding to a pandemic emergency.

A pandemic emergency has different economic effects on local governments than a natural disaster emergency. The most significant difference is that a natural disaster emergency will have high expenditure costs to repair damages, but a pandemic emergency has ongoing revenue losses due to the prolonged negative impacts on the local economy stemming from public health orders limiting business operations (Afonso, 2021; Dzigbede et al., 2020; Maher et al., 2020; Switzer et al., 2020). Afonso's (2021) research identified the most popular budgetary strategies used by local governments in North Carolina in response to COVID-19. These strategies include appropriating fund balance, reducing capital expenditures, increasing fees, and instituting hiring freezes (Afonso, 2021). Maher et al.'s (2020) study yielded similar strategies, such as reducing capital expenditures and hiring freezes but also included strategies like reducing public service hours and pursuing financial assistance through federal grants. Both studies also found that raising taxes was the least popular strategy employed by local governments (Afonso, 2021; Maher et al., 2020).

Many local governments have also considered the financial impacts affecting their local business community and, in turn, have created economic development policies to assist them during the pandemic (Dzigbede et al., 2020; Wilson et al., 2020). The most common policies include conditional grants provided to local businesses impacted by public health measures (Wilson et al., 2020). Other policies include creating loans for businesses, tax relief programs, multi-organization task force to consolidate resources available to businesses and developing websites with business-related information that can be accessed by residents (Dzigbede et al., 2020; Wilson et al., 2020).

It is important to note that all literature on financial impacts on local governments during the COVID-19 pandemic is from the U.S., which has different financial structures and regulations when compared to Canada. However, these studies (Afonso, 2021; Dzigbede et al., 2020; Maher et al., 2020; Switzer et al., 2020; Wilson et al., 2020) exemplify the additional financial considerations that local governments must address when responding to a pandemic emergency.

Regional Location

The regional location of a local government can have an impact on its emergency planning and response. However, these impacts vary based on whether the response is for a natural disaster emergency or a pandemic one. During a natural disaster, a local government with a large land area and a small population may have limited financial and human resources to respond to plan and respond to an emergency (Harris et al., 2011; Ollerenshaw et al., 2016) and may have additional geographic constraints to consider (e.g., mountain slopes) (Harris et al., 2011). Whereas during a pandemic, a local government with a small land area and a large population will have increased transmission rates; therefore, these local governments need to consider how these rates will impact their planning and response (Armstrong & Lucas, 2020; Danforth et al., 2010).

For example, Armstrong & Lucas (2020) found that municipalities with larger populations were more likely to implement aggressive COVID-19 response policies (e.g., closure of public facilities, cancellation of council activities) when compared to municipalities with smaller populations. However, this example does not negate the unique pandemic planning and response challenges in smaller rural and remote communities. Charania and Tsuji (2011) studied responses to the 2009 H1N1 pandemic in rural First Nations communities and found that these communities suffered from a shortage of on-hand supplies (e.g., masks and respirators) which was further exacerbated by an inability to transfer these supplies to the communities in a timely manner. The collection of these studies suggests that pandemic planning is complex and requires consideration of a myriad of factors, which includes regional location.

2.5 Summary

With the emergence of COVID-19, pandemic planning and response is becoming an important topic of study within the field of emergency management. This field of research is complex and includes various considerations and reoccurring themes. These considerations include the current state of pandemic plans and the recommendations on how these plans can be improved. Another consideration is the role of each level of government (e.g., national, provincial/territorial/state, local/municipal) and the role of individual actors (e.g., elected officials, emergency management staff). Some reoccurring themes across the literature that impact both planning and response efforts include collaboration with other entities, communication strategies, emergency training and exercises, public risk perception, the importance of digital infrastructure, financial impacts on planning and operations, and the influence of regional location. These considerations and themes highlight the different variables that can influence pandemic planning and COVID-19 response policies. The conceptual framework discussed below will illustrate how these considerations and themes rooted in the literature review guided the methodology of this thesis study.

2.6 Conceptual Framework

Conceptual frameworks can contextualize a literature review and use the existing considerations and themes to guide the design of a research proposal (Van der Waldt, 2020). These frameworks typically take the form of a visual representation of the main concepts of a study (Van der Waldt, 2020). Figure 1 below exhibits the conceptual framework for this thesis study.

Figure 1

Conceptual Framework

Research Questions

How did pandemic planning documents influence how local governments responded to the COVID-19 pandemic?

What is the current state of pandemic planning and response?

What worked well/did not work well related to pandemic planning and response?

What improvements could be made to pandemic planning and response?

Are there any differences based on the regional location of a municipality?

Literature Review

Role of Local Governments: centralized vs. decentralized approaches

Collaboration: includes regional, intergovernmental, and community collaboration

Regional Location: rural vs. urban location / small vs large population

State of Existing Plans: current state of existing plans and recommendations in improvement

Communication: includes communication plans and community, intergovernmental, and internal communication strategies

Digital Infrastructure: current state and importance of this type of infrastructure during a pandemic

Role of Elected Officials: level of involvement and influence of elected officials

Financial Impacts: includes fiscal strategies during the pandemic and types of local economic aid

Emergency Training & Exercises: types of exercises and the impact of training on planning and response efforts

Public Risk Reception: influence of public risk perception on compliance of policies

Chapter 4: Methodology and Methods

This chapter outlines the methods used to collect the data for the study. The study was approved by the University of Victoria Human Research Ethics Board (certificate #20-0614) on March 26, 2021.

4.1 Methodology

The research uses a qualitative methodology to conduct a gap analysis of pandemic planning in local governments in B.C. The concept of gap analysis is rooted in conversation biology as a process of determining what elements are missing from an ecosystem and how this information can be used to inform conservation actions (Jennings, 2000). In simple terms, a gap analysis examines the current state against the desired future state by analyzing the gaps between the two states (Jennings, 2000). This gap analysis identifies the current state of pandemic planning in B.C. as well as how local governments used their pandemic plans to respond to the COVID-19 pandemic. This current state approach provides insights into the unique experiences of each participant and their respective local governments while also comparing these experiences against each other to demonstrate the commonalities and differences between the actions taken by local governments during the COVID-19 pandemic.

The current state analysis looks at the participants' reflection on the quality of their existing pandemic plans prior to COVID-19 and the degree of usefulness of those plans when responding to COVID-19. The analysis also looks at the response from each participant's local government and what elements were taken into consideration when developing that response. The analysis of the desired future state stemmed from participants' views on challenges during their response to the COVID-19 pandemic and improvements that could have been made to have a more successful response. This analysis helps determine what gaps should be addressed by local governments before the next pandemic emergency.

4.2 Methods

Semi-Structured Key Informant Interviews

Ten semi-structured key informant interviews were employed to collect data for this thesis. Key informant interviews were traditionally a method used in anthropology research but have become more common in social science research (Tremblay, 1982). This method involves in-depth interviews with a small sample of individuals who have first-hand knowledge or experience related to the topic of study (Tremblay, 1982). Semi-structured interviews are a data collection method that includes a basic set of questions for all participants and additional questions that further investigate different facets of the research questions based on the initial answers of the participant (Ahlin, 2019). In the context of this thesis, key informant interviews were used to provide first-hand experience from emergency management experts on their planning and response to the COVID-19 pandemic. Since local governments across B.C. have

faced a number of different pressures and situations when responding to this pandemic, key informants can provide knowledge on the specific intricacies unique to their local government and community.

Participants

Ten participants from ten different local governments participated in the study between April-July 2021. There were two participants from the Vancouver Coastal Health region, one participant from the Interior Health region, two participants from the Fraser Health region, five participants from the Island Health region, and no participants from the Northern Health region. There were three participants from municipalities with a population greater than 50,000 people, there were four participants from municipalities with a population between 10,000-50,000 people, and there were three participants from municipalities with a population less than 10,000 people. The participants held a variety of positions, and in many cases, more than one position; these positions include Emergency Program Coordinator, Fire Chief, Chief Administrative Officer, Chief Financial Officer, Deputy Chief Administrative Officer, Deputy Fire Chief, and Superintendent of Street Use Enforcement, Parking, and Animal Services.

Sample

The participants and their respective local governments were selected through purposive sampling to ensure the inclusion of municipalities with different populations and geographic locations. One-hundred-thirty-five (135) municipalities in B.C. were recorded and separated into fourteen categories based on their regional health authority and their population within a given range. The sample did not include municipalities under the operation of regional districts or First Nations band governments since they both have different operational structures and functions. Below, Table 1 outlines the requirements of each category and the corresponding number of municipalities.

Table 1

Local Government Sample Categories

Regional Health Authority	Population Range	Number of Municipalities
Vancouver Coastal Health	< 50,000	8
Vancouver Coastal Health	>50,000	3
Northern Health	<10,000	19
Northern Health	<10,000	5
Island Health	<10,000	15
Island Health	10,000-50,000	13
Island Health	>50,000	3
Interior Health	<10,000	39
Interior Health	10,000-50,000	10
Interior Health	>50,000	2
Fraser Health	<10,000	4
Fraser Health	10,000-50,000	5
Fraser Health	50,000-100,000	4
Fraser Health	>100,000	5

Once local governments were categorized, participant information was collected and recorded from the CivicInfo BC website. CivicInfo BC is an incorporated non-profit society that provides a wide variety of tools and information resources for the local government sector in British Columbia (CivicInfo BC, 2022). This website includes the contact information, position, and professional category for all senior employees of a local government. One potential participant was chosen from each local government based on their position and professional categorization. Potential participants included positions such as “Chief Administrative Officer,” “Fire Chief,” and “Emergency Program Coordinator” and professional categories such as “emergency management/planning” and “fire/rescue/first aid services.” These positions and professional categorizations were chosen as they are most likely to have a role in the formulation of emergency planning documents or the implementation of COVID-19 response policies.

Research Process

Once potential participants were identified from each local government, participants were then randomly selected from each category. Fifteen of the selected participants were contacted via email (see Appendix A). If the participants did not respond within one week, there would be a follow-up telephone call (see Appendix B). It is important to note that the study had initially intended to include fifteen participants, one participant from thirteen of the categories and two additional participants under the “Interior Health <10,000” category since this category included substantially more municipalities; however, during data collection, it became evident that the sample selection had become skewed based on the willingness of participants. If a selected participant did not wish to be included in the study, a new participant would be randomly

selected from that same category. By the end of the data collection stage, all one-hundred-thirty-five local governments were invited to participate in the study.

After a participant agreed to be included in the study and signed the consent form (see Appendix C), they would be invited to participate in a thirty-to-sixty-minute interview via the teleconferencing service Zoom or by telephone. The participants did not receive the interview questions in advance and were asked the same basic set of questions (see Appendix D); however, due to the semi-structured nature of the interviews there were many additional follow-up questions that further informed the analysis. All interviews were recorded so that they could be transcribed at a later date.

There were minor accommodations made during the data collection phase of the research. Two of the participants are from different local governments but work collaboratively in a shared emergency management office for the two communities. These participants requested to be interviewed together. Also, one other participant had various scheduling conflicts and technology issues, so they were sent the interview questions by email to be completed and sent back to the interviewer at a later date.

4.3 Data Analysis

The data for this study were analyzed using the semantic approach of a thematic analysis, which requires the interviews to be coded into themes based on the explicit answers provided by the participants (Braun et al., 2019). At the completion of the data collection phase, the interviews were transcribed and uploaded to the NVivo software program. The transcriptions were coded into themes using inductive coding, so the themes were created based on common topics discussed by multiple participants. The codes were separated by both parent and child codes, meaning that multiple themes had subthemes connected to them. For example, the “collaboration” parent code also included the child codes “local government” and “provincial government” to separate the type of collaboration that occurred between different entities.

4.4 Strengths and Limitations

Limitations

There are some limitations of this study related to the topic selection and the willingness of participants during the data collection. The most significant limitation to this topic is that the COVID-19 pandemic is ongoing. The pandemic began significantly impacting B.C. in March 2020, and there continues to be case numbers and travel restrictions as of June 2022. The fluctuation in the number of cases suggests that municipalities may be continually revising their response plans and policies as the pandemic unfolds. Therefore, the data collected during this study may only represent a fragment of the COVID-19 planning and policy process in the selected municipalities.

The other limitation of this study is the skewed sample selection. The methodology used intended to include municipalities from a variety of regional locations and population sizes; however, many proposed participants did not respond to the study invitation, or they claimed they were too busy to participate in the study, which was especially common in more rural communities. All one-hundred-thirty-five local governments in B.C. were invited to participate in the study, but only ten participants agreed to participate. The lack of willingness of participants led to the sample size missing the intended regional representation since the majority of participants were from Vancouver Island (Island Health) and Lower Mainland (Vancouver Coastal Health/Fraser Health) regions.

Strengths

The most significant strength is that the study is topically relevant to current events. As discussed previously, the COVID-19 pandemic is ongoing. In addition to the ongoing pandemic, British Columbia has experienced a myriad of natural disasters in 2021, including a record-breaking heat dome, an early wildfire season, and catastrophic flooding. Taking into consideration these events, an increase in emergency management research will become vital to addressing the issues now and in the future.

Chapter 5: Interview Findings

This chapter describes the interview findings from the ten participants who contributed to this thesis and delves into the main themes that emerged throughout the interview process. These themes include the state of existing plans, collaboration, communication, impacts on staff members, digital infrastructure, regional location, and financial impacts. The chapter will conclude by revisiting the conceptual framework identified in Chapter 2.6 [Conceptual Framework].

5.1 Main Themes

State of Existing Plans

All participating local governments had emergency plans prepared that addressed natural disaster events common to their area, and most local governments (7/10) also had an existing pandemic plan. Yet, the state of the pandemic plans differed between local governments. Some local governments had fulsome pandemic plans, others had outdated and limited plans, and a few had no pandemic plan at all.

Participant A indicated that their local government had emergency plans for most scenarios, with the most attention being paid to earthquake disasters. The local government did have a pandemic plan, but the participant mentioned that it was not necessarily useful. They explained,

To be really honest, almost at the beginning we realized it was too high-level. It gave us a bit of information, but we had to construct everything from almost scratch. Like it [the existing plan] was very theoretical, so we really had to pivot quickly. We needed an operational plan, like closing playgrounds, closing city hall, we had never contemplated those specific actions... so in terms of pandemic plans I would say we would have a general sense of what we were going to do with the pandemic, but we really had to create a lot of the response in the moment. (Participant A).

Participant E also commented on not having an adequate pandemic plan in place prior to the COVID-19 pandemic. They discussed,

We had a pandemic plan, but it was SARS influenza-based and that was the problem...our old pandemic plan was based around taking temperatures...but as soon as the medical officer said taking health temperature wasn't helpful with COVID, that changed everything for us. (Participant E).

The participant continued,

We did have to do a new pandemic plan and a new business continuity plan...although our influenza based pandemic plan went out the window, a lot of our other procedures did apply, we just had to tidy them up a little bit, but they were a good base moving forward. (Participant E).

Participant H also had an existing pandemic plan that revolved around the SARS pandemic which was problematic for the local government. They indicated,

It was an old dusty plan, as I am sure a lot of them were. I would say in terms of us opening up the plan and saying this is what we should do it wasn't super helpful for us: a) because it was too old and b) there may have been other pandemics that they were based on like SARS which was what ours had been previously based one, this pandemic seemed to be, well it actually was, quite different in terms of how we had to respond. We didn't really have a book or a guide that had all of the steps where if we followed them, we would have been great. (Participant H).

Participant B discussed the specifics of their hazard, risk and vulnerability analysis (HRVA) and their emergency response plan which includes sections on pandemic preparedness and is updated regularly. In 2019, the emergency response plan was updated to reflect the HRVA, which included a section on a pandemic response. They specified further,

It [pandemic preparedness] is clearly identified in our HRVA that we do every five years, because it is quite an exhaustive process. It is very clear in our HRVA and it tells us what we should be preparing for, and every time we do it, pandemic preparedness is identified as a risk in our community. As such, we have, and had for many years, a pandemic plan, which we continuously maintain and update to reflect the new realities and the changes of our environment and our business. (Participant B).

Participant G also linked their existing pandemic planning to their HRVA. They explained,

Primarily our pandemic response plan was largely built from HRVA analysis specific to our town, which has a large cohort of nursing homes, so we really built around a response to a large influenza epidemic. Understandably, from an HRVA perspective that is what made the most sense. So, the trigger points and the rationale for the situation of an EOC was valuable but there really wasn't a lot of value to that existing response plan other than let's get going, this is justifiable, and we will go from there. (Participant G).

Two participants indicated that improvements were starting to be made with regards to planning in their respective emergency management departments. Participant I described the planning work that they had begun prior to the COVID-19 pandemic. They specified,

We do have an all-encompassing emergency plan, it is pretty dated now though, there was a consultant hired to do an emergency plan which is very cookie cutter and I have been building upon that, but I have been building based on our HRVA, which I did update as well. (Participant I).

The participant continued,

It is one thing to tell a person ‘yeah we have a plan’ but it is like a fire drill, if you have a fire safety plan but never practice your fire escape plan how do you know it is going to be functional and you actually need it. (Participant I).

Collaboration

A recurring theme identified among participants was the importance of collaboration. During the interviews, participants were asked if they collaborated with regional districts, other local governments, or any other government administration during their pandemic planning or response. According to the participants, collaboration during the COVID-19 pandemic occurred with various entities including other local governments, the provincial government, internal departments, elected officials, and the community.

Local Government Collaboration

The majority of participants (9/10) mentioned collaborating with neighbouring municipalities, regional districts, or other regional bodies in varying capacities. Collaboration between these bodies involved the sharing of emergency management departments as well as emergency planning and response documents or the creation of regional working groups or committees.

Three participants indicated they were involved in a shared emergency management department between other local governments. In all cases, these departments were established prior to the COVID-19 pandemic. Participant A detailed the role of their shared department,

Our [regional area] emergency management is part of our response and supported us at a more broad level. They were the liaison for the only hospital in [our regional area] ... they would work with the fire departments, the health authority, and the hospital broadly when we needed. (Participant A).

Participant D and E also discussed the benefits of having a shared emergency management department with each other. They suggested,

[Regional emergency management] was a no brainer for us. We are two small municipalities, so [Local Government E] had built the volunteer base and done a lot work that had to be done to build an emergency management program that basically covered the whole region. But coming in, when I got the job at [Local

Government D], I found we have limited resources if we act on our own, limited volunteer base, EOC response capabilities, resources, staffing, facilities, and funding, we didn't have much if we just worked separately, so it was, in our mind, a really easy move.” (Participant D).

Half of the participants (5/10) mentioned sharing planning and response documents between local governments. For example, Participant B discussed having their pandemic plan shared among municipalities across B.C. They revealed,

All kinds of people from all different local governments from across British Columbia called me... ‘hey heard you got a great pandemic plan would you mind sharing it?’... we had a sanitized version made that we did actually share with all types of local governments and regional districts to help them in their time of need. We were lucky enough to be ahead of the curve and had information that we could share. That’s what it is all about, helping others too. (Participant B).

Participant G described sharing their daily situation reports related to staffing, planning, and bylaw enforcement with neighbouring municipalities and Participant F utilized the pandemic response plan created by their regional district as their primary planning document.

Half of the participants (5/10) also indicated that their local government had position-specific or department-specific working groups or committees that collaborated with different local governments across their region. For example, Participant H mentioned,

We have a regional administrators advisory committee at the [regional area] level, and that is essentially all of the chief administrative officers and emergency managers for all of the local governments within [the regional area]. We already have this committee set up and we try to meet once a month to talk about regional issues essentially, and when the pandemic hit, we started to talk to each other quickly to see what is happening and what everyone is doing, what facilities are you closing? What facilities are you re-opening? What are you doing with your staff? We had very regular conversations about what we were doing, and it was in an effort to try to be as consistent as possible throughout our region. (Participant H).

Participant C discussed the value of collaborating in these working groups and committees, they indicated,

I think it is like hybrid mix of using what is good and rewording things, but every municipality is going to be unique so there is going to be some independence. That is the greatest part about working in local government is you are not competing for interest so you try to share and collaborate as much as you can. (Participant C).

Provincial Government Collaboration

Many participants (7/10) referenced the importance of collaborating with the provincial government during the COVID-19 pandemic. The participants discussed the advantages of collaborating with the provincial government, while other participants indicated that there were negative experiences collaborating with the provincial government.

Some participants (4/10) discussed some of the benefits of having a strong working relationship with the provincial government. Participant G indicated,

I think our ongoing positive relationship with EMBC really influenced our conference centre becoming a vaccination clinic, so that was really positive. They came to us and got us to develop a plan of what that would look like. We kind of facilitated it, and it was good we could lever those relationships to get the clinic up and running quickly. We are proud of that. (Participant G).

Participant D provided some insights on how to develop a strong working relationship with the provincial government. They explained,

I think one of the keys to success is to work with them [the provincial government]. Make an ally, make a friend, what can we do for you, what can you do for us, and try to avoid all the B.S. We can figure that stuff down at our end. When we needed something from them, we didn't bug them every day, but when we did need something, we got a response right quick and it worked well. We probably manage as much as we can ourselves. And don't look at them for absolutely everything and discuss that plan with them throughout the pandemic.”

Three participants indicated that the current staff at Emergency Management British Columbia (EMBC) have helped improve their relationship with the provincial government. Participant E discussed,

Dealing with the province, is better now than it has ever been, but that is based on the personalities that are involved. The senior regional manager comes from our level of work, and he is a former emergency management coordinator at the local level. So, he gets its. He struggles with trying to deal with the provincial government monster that we all deal with. He was very supportive when we talked to him at the beginning of the pandemic on how we wanted to address the pandemic. (Participant E).

Despite the positive experiences previously discussed, two participants revealed that they had minor problems at certain periods during the pandemic that effected their ability to collaborate with the provincial government. Participant I described,

I think when we look back on when we went rogue, I wish we could have been more collaborative with the province, and we actually had a letter at some point telling us to cease and desist...there was a lot of stuff that we got in trouble for but at the end of the day now it seemed perfectly naturally...we were not trying to make the province look bad we were just reacting to what our citizens wanted. (Participant I).

However, both participants reiterated that despite these issues, they felt that the provincial government had done an excellent overall emergency response to the COVID-19 pandemic.

Department Collaboration

Most participants (7/10) referenced collaborating occurring between local government departments to address the COVID-19 pandemic. This collaboration occurred through the formation of an Emergency Operations Centre (EOC) or COVID-19-related committees and the drafting and sharing of pandemic planning and response documents.

During the COVID-19 pandemic all participants established an EOC, and three participants mentioned establishing pandemic-related committees in addition to an EOC. Participant A provided an example as to why their local government formed an operational committee which included representatives from every department. They explained,

For example, with washrooms, we wanted to make sure that all our washrooms, whether they were being handled by our parks crew, our city hall crew, or our shipyards crew... we wanted all the washroom operators to make sure that their cleaning and opening protocols were exactly the same. (Participant A).

Participant I provided details on how the location of their EOC negatively impacted collaboration between EOC members. They described,

I worked out of city hall, and we had three board rooms set up for operations, logistics, and planning in the three board rooms. We had the EOC management staff in another area there, but we lost control. An EOC works really well when everyone is getting information at one point and comes in and gets sent off to different areas to make their decisions and then get sent back for a debriefing a couple times a day so everyone is on the same page. When everyone is working in different spots in the office, lots of time information was coming in and being actioned right away but other areas were not included in that. (Participant I).

Three participants highlighted the importance of including other departments in the emergency planning process. Participant B indicated,

[The pandemic plan] is worked on by all our senior leadership at the city, with me being a major component to that. Our job from the senior leadership group going

down is met out and everyone has a look at their role and responsibilities, their staffing levels, what they feel like they are going to be able to do at 50%, what does 60% look like? That type of thing, so what does that look like for each individual department and their business unit going forward. And again, we look at all business units, and not just what you would normally coin as “essential services” [participant used air quote gestures]. A vast majority of people in our organization look at our pandemic plan, not something done in a silo and deciding this is where we are going to do business. (Participant B).

Elected Official Collaboration

Half of the participants (5/10) mentioned how the elected officials in their local government impacted their pandemic planning and response. These participants discussed the value of having support from their elected officials and the importance of clarifying the role of elected officials during an emergency.

Two participants discussed the importance of limiting the involvement of elected officials in their EOC. Participant B described,

The roles of our policy group and our elected officials were clear, and they wanted in on the early stages, and to the credit of our leadership team ‘no these are EOC decisions, we will get back to you on those things and keep you advised going forward and if we need direction on policy, we will ask for it.’ (Participant B).

Participant I indicated that there was a period where the role of their elected officials became blurred and it negatively impacted EOC operations. They explained,

We had a policy group which was led by the mayor, which it shouldn’t be led by the mayor, who had his own team of people he relied on which were all community members, so the policy group went from city councillors, the chair of protective services and some city staff making decisions, to the mayor and a bunch of external agencies dictating to city staff. We lost control from an EOC perspective. (Participant I).

In contrast, Participant H described the benefit of having increased involvement from their elected officials which helped influence their policy decisions. They indicated,

Our council has five members, and I think with most small communities, councils are very involved in terms of operations. So the mayor was out walking around the community all the time in terms of the response and he could really relay to us as staff where some of the needs were in terms of the response... all of our councillors are very in tune with the residents. It is quite face-to-face unlike what a larger municipality might witness. They had a really good pulse on what was needed in

terms of a response and we were able to move operations in that direction to make sure we were meeting the needs of our community. (Participant H).

Three participants mentioned that having support from their elected officials helped them respond to the COVID-19 pandemic. Participant G indicated that their elected officials were understanding regarding burnout among emergency management staff. They explained, “fortunately, we have tremendous support from our elected officials, and they recognize it, and they were kind of early adopters of this is our mission to support our staff, and lead by example to get through this.”

Community Collaboration

A few respondents (4/10) specified collaboration efforts with community stakeholders and the general public. Three of these participants indicated that they tried to provide opportunities for the general public to influence policy decisions. Participant I discussed how they reached out to their community members, they explained,

We also called all of our residences... we just had teams of people who would, all day long, call residents, and had a survey for them on how they were doing, do they know anyone who is vulnerable and needs something, what more can we do for them, were they getting the answers they were looking for. And then we used the results of those surveys to build our webpage and build our response. (Participant I).

Two participants mentioned that they included business stakeholders from their community in emergency management decisions. Participant G discussed the actions they took include the business community in emergency management decision-making. They specified,

We embedded the director of our local chamber of commerce into our EOC in the planning section... she was right there in the planning office at a desk, sometimes she would bring an assistant from the chamber to support her and we supported her with staff as required...so many of the local business concerns could come directly to the EOC and we could deal with them and bounce them off right there in a very collaborative and quick way and be very respondent. (Participant G).

Communication

In conjunction with the theme of collaboration is the importance of communication within the local government and with entities outside of the local government. In this section, the participants discuss the necessity of properly communicating between departments, with the provincial government, and community stakeholders. However, the participants indicated that there were some issues regarding the communication with the provincial government and

communicating to individuals in their local government and community about the seriousness of the pandemic.

Inter-Governmental Communication

Six of the participants discussed the importance of communicating with the other levels of government during the COVID-19 pandemic, however, most of these participants felt that this type of communication was the most challenging. Participant B expressed some of their concerns,

We actually declared a local state of emergency in our city. I didn't want to do it, but we were getting no direction from the province. I didn't see one coming. All they had to do was tell us what was coming like "hey guys just give us a week or two." All they had to do was do it quietly, but they forced us. That was quite a negative for me. (Participant B).

Participant E echoed similar concerns regarding information received from the provincial government,

The pandemic amplified the problems with the provincial government...even though they came out and tried at the very beginning and said that they stepped us [emergency programmers] up to be key leaders for local government, and we were going to be contacted by EMBC and EMBC was going to be our funnel. Well quite quickly is what we saw were the silos of other ministries with Municipal Affairs or whomever. All of a sudden, we heard that the mayors were having conference calls with different ministries. Our CAOs were having conference calls with different ministries. So, when we would sit down and have our meetings as groups with EOC we quite quickly realized that everyone had different information. And that was really a struggle to work through all of that. (Participant E).

Participant G described how implementing directives from the federal government caused local problems in their community, they explained,

It was hard to find a balance in respect to some of the communications that we were getting from senior levels of government in respect to direction. And probably the most direct example would be, we received direction that, at the time, we shouldn't support or facilitate any gathering where people could converge and gather and this was even outside at the time, so based on that and direction from the federal government that people should not be recreationally boating, we took the step that we were going to close our local boat ramp. It was just for recreationally use, because we had a flood of complaints from the public that there were 15 or more people on the dock while they were tying up a boat. So, we decided on the basis of this, we quickly articulated it wasn't for people who were paying their bills and

stuff and the blowback we had... I think I was public enemy number one for a while. That was an unforeseen, you think you are doing your best taking direction from senior levels of government, trying to be progressive, and that one really came back and bit us. (Participant G).

Internal Communication

Several participants (7/10) detailed how they communicated their pandemic plans and policies throughout their organization. Participant A utilized daily or weekly phone calls, they indicated, “we continue to do that [phone calls] with really quick touch points on what your department currently doing? What are your issues? We try to align every department’s response so we are all doing the same thing.” Participant B identified that it was important to include all departments in the response effort, they explained,

I wanted to brief the leadership team, all the directors in the city, so they understood what their unique roles were going to be. It’s not just about utilities managers and fire chiefs, this is about you guys [senior staff] in the room. And they empowered me and continued to empower me at that level to bring everybody together and manage these events, especially in those rapid early days. (Participant B).

Participant J indicated that they posted their plans online where they could be accessed by members of their organization. They explained,

What we ended up doing from the larger plan is we boiled it down to the essential components which were necessary for staff and we put those on our intranet, and it is where people get their information... so we had our pandemic COVID-19 pages, and it had all the information there including the medical directives that we were operating under. (Participant J).

Community Communication

Although some participants (6/10) indicated that communication, particularly with the provincial and federal government, was one of their greatest challenges when responding to the pandemic, the same number of participants believed that one of their greatest successes was communicating information to the public. The participants described innovative methods of communicating information to their community, such as the use of digital platforms. Participant D described what they created virtually,

One of the challenges created one of our successes: communicating with the public. We have a huge public outreach program that we do and reach 1000s of people face-to-face every year through education. This became a challenge with the pandemic, and we developed a digital newsletter. And so that quickly, within a

couple of weeks, we had about 1,500 signed up for it. So that was a huge success, and it is still something we hear from people “keep it up we want this to stay.” Little things like that that we will add to our program, that was a success. (Participant D).

Participant I also used an online platform to relay information in addition to phone call check-ins, radio campaigns, and pop-up information centres. Regarding the online platform, they explained,

We put together one comprehensive webpage with all the information we had, we had our EOC have the task of watching the news every day, and when that became a lot, that is when we hired a university student to do daily briefings for us of what is going on in the world and new things the federal and provincial government were launching for initiatives for businesses and employees and so we put it together in one comprehensive place. (Participant I).

Participant G indicated that the collected of different communication mediums was a success for their community, they explained “we were active on social media, print media, I don’t think I have been the camera so many times when I don’t want to be. And we garnered a lot of public support. A lot great feedback, that were really receptive.”

Communicating Pandemic Severity

Half of the participant (5/10) articulated that communicating to staff and the public that the pandemic is a serious emergency was difficult. Participant D explained,

A couple of things [challenges] for me, like any event, at the beginning I think there was a challenge getting our municipal staff to recognize how serious this was and “hey listen to us over here we know what we are talking about.” Our CAOs once we got them on board they started to, they knew their job was to push that message down, but a lot of our senior staff at the beginning did not take this seriously. Our response could have been a bit more timely at the beginning like with how we implemented some of our policies and our procedures and that but those are learning lessons. (Participant D).

Participant J discussed similar problems, specifically convincing staff to follow new safety protocols based on pandemic severity, they indicated,

We had to implement non-physical training, digital training, people don’t like that, and people are sitting around, and we are telling people to sit a part and wear masks and it is really hard to keep people doing that for a long period of time. There was a lot of time spent trying to be diplomatic and help people understand the importance of it, that we understand it is hard, but we have to do it. (Participant J).

Alternatively, Participant I felt that convincing the public to follow measures during later phases of the pandemic was more difficult than at the beginning of the pandemic. They explained,

Now the ironic part of it was during the second wave, it was different. I think the fear factor dropped quite a bit. Everyone was afraid in phase one and I think we probably overreacted to phase one especially here in our [regional area] when we didn't have a lot of cases. So, we were much more rigid in phase one than we should have been, and we were actually less restrictive than we actually should have been for phase two and three. (Participant I).

Communication Plan

Only two participants indicated that they had a communication plan that informed their pandemic response. Participant D explained,

The one other plan we had too wasn't exactly driven by the pandemic, but it sped up the need for it was our crisis communication plan...being that we were the middle person in this event from the health officer to the public, communication and information was important. (Participant D).

The participant continued,

We have a really good communications manager that works with us, and we are pretty much done, probably 99.9% done with that one [the crisis communication plan]. It was a good time to do that planning as well, we were really using communication on all levels. (Participant D).

Staff Impacts

Many participants discussed the various impacts the COVID-19 pandemic had on local government staff members which included references to ensuring staff safety, managing staff layoffs, conducting emergency management training for staff, and responsibilities, and staff capacity.

Staff Safety

Most participants (8/10) indicated that ensuring staff safety was a priority during the COVID-19 pandemic. Staff safety includes creating and enforcing workplace safety policies and being cognizant of staff burnout.

Half of the respondents (5/10) mentioned the important of their workplace safety plans and some of the changes that were made to prevent the transmission of COVID-19. Participant A discussed what they did to ensure staff safety, they explained, "the remaining city hall staff were able to work from the office throughout the pandemic and were able to make physical changes in

the building to support a safe work environment throughout the pandemic.” Participant B voiced a similar sentiment, they said,

One of the biggest things we learned from this [the COVID-19 pandemic], is the role of our safety team, safety procedures and engineering workspaces. As things further developed over the course of time, now we understand how we can come back to work. (Participant B).

Four of the participants discussed the impact of staffing burnout on their operations. Participant G discussed how staff burnout has impacted their project schedule, they explained,

We have all kinds of senior staff that have had less than one week of holidays in the past 16 months; so before we as senior staff commit to a deep dive into a bunch of projects that we had shelved before, we want to make to very clear to the elected officials, and I hate to say it, but we are going to glide till the end of the year and start fresh otherwise we are going to burnout people and we are going to lose people. (Participant G).

Participant J identified the unique connection between new workplace safety measures and staffing morale. They described,

The challenges were keeping morale up and keeping people connected to one another while keeping them separate while trying to maintain the practices that we were mandating, physically distancing, mask wearing, barrier installation, it is really not engineered that way, so we had to put in some controls and make sure that people weren't modifying them because they resisted that. (Participant J).

Staff Layoffs

Several (7/10) participants discussed how they approached staff layoffs during the COVID-19 pandemic. Some participants were forced to cut back on staff, while other participants described the ability to move staff members between departments.

Two participants mentioned that the COVID-19 pandemic caused them to lay off staff. Participant A described the situation in their local government, they explained,

Our recreation department has approximately 900 staff and at the start of the pandemic they probably laid off about 800 of them. A lot of them are your students, and auxiliaries and lifeguards, your program coordinators, and they are still probably at 600 layoffs. So, there are still massive amounts of HR impacts to municipal employees because of the pandemic. Because of that service in particular is typically not what it is during a normal year. Until the pandemic is over, they don't contemplate bringing staff back in any kind of robust way because they just can't. (Participant A).

Participant B also discussed their local government's reason for cutting back on staff capacity, they specified,

We have about 600 staff...some of those staff were laid off, park staff and lifeguards, so we had to make some hard choices. Because we offer a lot of services in our city and a lot of those services weren't essential anymore, so even though we didn't want to, we had to make these decisions for the financial health of our city, because municipal government can't run on a deficit. So, we had to be very aware of that. (Participant B).

Five of the respondents mentioned their ability to move staff members between departments as needed, rather than laying off individuals. Participant C described their circumstance,

No full-time staffers were laid off and people just picked up different duties. It was going out and being the COVID compliance officers and different things like that; a lot of people wore different hats and kind of shuffled through the organization in different ways where they would be able to work. (Participant C).

Participant E also recounted moving staff to their emergency department, they described "for a short time we were the biggest department between the two local governments. Instead of sending people home they were repurposed under our EOC for whatever met our needs."

Staff Training

Six participants mentioned the need for emergency training for staff and some of the downfalls of having staff members involved in an EOC that do not have extensive emergency experience.

Participant G discussed the value of having all local government members receive emergency management training, they explained,

Senior staff and staff in general it should be embedded in their job description that a certain amount of EOC training is required. We had done okay, most of the folks in finance, and all our EOC members at least had the EOC essentials and some of them had section-specific training. (Participant G).

Participant C talked about how training staff for a pandemic emergency rather than a natural disaster emergency may have been more beneficial. They explained,

For an earthquake we would have to learn all this stuff on the fly and have to respond a lot quicker than we actually did. I think it was a bit of a blessing in disguise that it was a slow-moving pandemic that allowed everyone's feet to get wet, because this is the first time a lot of people had to deal with EMBC. So that

whole structure is totally different, and I think this was that opportunity for everyone to understand it at a slower space. (Participant C).

Participant I discussed some of the problems associated with a lack of EOC training among staff. They described,

I think what was a challenge was operating our EOC. We don't have a lot of experience with EOC work, and I think there was a reluctance on even having an EOC at first, we became overwhelmed. I had to do a lot of education for a lot staff as to what we were doing, so the roles got really muddy. (Participant I).

Staff Capacity

Despite the difference in the size of each local government that participated in this study, several participants (7/10) indicated that they lacked staff capacity to manage the pandemic.

Participant A described the extra responsibilities that staff had to manage during the pandemic, they said,

You don't have a lot of opportunities to specialize people. Everybody did every little bit of the response in addition to their regular duties. Regarding administration everybody had to pick up new stuff to help the process and just continue to do their regular job as well. Everybody was doing ten jobs at once, that is local government on any day, but during COVID it was accentuated. (Participant A).

Participant I also discussed the difficulties managing staff in a local government during the pandemic, they explained,

While we kept drawing in more staff to help run the EOC, other departments were trying to run a city and did not want us drawing more people away from that. We ended up using a lot of people like the university and pharmacies to help with our policy group and the EOC for planning purposes, so we were not drawing city managers from their jobs to focus solely on COVID. (Participant I).

Participant C discussed some of the challenges of having limited infrastructure and staff capacity, they explained,

I will use our engineer and operations for example, we only have one yard where [neighbouring municipality] has three or four different yards. So, if we had an incident at engineer and operations at one yard our whole yard is gone. Whereas in [neighbouring municipality] if you have three different engineering and operations yards you can still serve the community even if you shut down one yard because someone tested positive. Same thing, we only have three fire halls where other

municipalities may have 20 well there is that ease for cross contamination in that way. (Participant C).

In contrast, Participant J implied that having less infrastructure could have advantages, they discussed,

We have four fire stations, whereas other places have one station and if you only have one station it is a lot easier to manage. And other departments have eighteen stations so there are different considerations. We are kind of in between the two, so we were able to achieve some things that a smaller department would be able to do and some things that larger departments would be able to do. (Participant J).

Participant F also felt that being a smaller size was beneficial to their emergency response, they explained, “being a smaller local government possibly made it easier to manage the ‘shut down’ and implement new policies and procedures.”

Digital Infrastructure

Over half (6/10) of the respondents mentioned the importance of digital infrastructure when maintaining government services during the COVID-19 pandemic. The responses varied from discussing the difficulty of transferring to an online work environment as well as the innovative policies that arose from having to continue to offer services to the public.

Participant A discussed some of the complications when transitioning to staff to working online. They described,

That [shifting online] was a very big task in the first week to the first month. We had to purchase new tablets and up our bandwidth at city hall. We didn’t even have VPN, so we had to get that in under a month to make sure everyone can get connected. I think before the pandemic we may have had only 30 ports into city hall. In the first week we had a schedule, and everyone was fighting over who could use the server to within a month we had a VPN and could have 150 people online all at the same time. (Participant A).

Participant I had a similar issue with transitioning council activities online. They said,

We were very slow to react to online streaming, we had closed city chambers down and ended up going to a conference call for council meetings, but they were very problematic. Council didn’t have any training with that prior too so it was a struggle for a while. (Participant I).

Despite the initial issues mentioned by other participants, Participant E identified that handling emergencies virtually has always been possible, they described,

We know that virtual worked because if we go back to the 2018 windstorm I couldn't get here. I was trapped because the roads were closed, but I was able to function from my home, whether it was through my computer or just on the telephone. I could do everything that I needed to do, it did make it harder to not have someone for the physical distribution of work, but it did work. But once we got into the pandemic and 90% of what we did was virtual it was really flawless and seamless, and it could work. (Participant E).

In addition to transitioning to an online system for both government and employees, both Participant A and Participant C discussed how moving some services move online have benefitted the public. Participant A described,

A couple of examples include building inspections, which are typically done by the person going to city hall to book the inspection and the inspector going to the person's site and walks through the building with you. Now that is all virtual. We do want to go back to in-person building inspections but maybe not all of them. The booking is now all online, the person being inspected has to FaceTime [the building inspector] as they walk around the site. This one improvement is that it allows us to change our service times. (Participant A).

Other examples provided by these participants include submitting building plans or paying money owed to the local government online.

Financial Impacts

Many participants (7/10) made statements about how the COVID-19 pandemic financially impacted their local government. The participants commented on how the pandemic negatively impacted municipal finances, the reasons why financial impact was minimal to some of the local governments, the financial benefits from local collaboration, and the relationship with the provincial government with regards to financial recovery.

Two participants identified financial concerns within their local government during this period. Participant A discussed how responding to COVID-19 impacted the progress of their capital projects, their hiring potential, and influenced long-term changes to their financial systems. With respect to capital projects, they stated

We paused on a lot of capital projects; only capital projects that had to go were allowed to go. For example, we had just issued an RFP (request for proposals) to renovate our council chambers, which is an important project for council, but we paused that and didn't do it last year. We didn't know if we would need that money for something else. (Participant A).

The participant explained how hiring practices were also impacted,

Every department did the same thing, if you had vacancies you had to hold them. It didn't matter what position it was you were not allowed to fill vacancies. The number one problem was financial and then the people. So, we were all struggling with trying not to spend but we still had to do our basic services, but nobody had the right amount of people in seats and had a lot of vacancies when the pandemic hit. (Participant A).

These experiences led the local government to consider changing some of their financial practices, the participant conferred,

Also, in terms of financial impacts, we are looking at changes to our financial systems so people understand our operating budgets at a more detailed level to see where they can dial back when needed. It's a real struggle for us in terms of our spending and how you can scale that back without putting a halt to your services. (Participant A).

Participant B also discussed how their finances have been a challenge for the local government during the pandemic. The participant explained,

Even today, we are still managing our finances around COVID, which has greatly affected our revenue. Business is pretty quiet right now. So, there is a tremendous amount of revenue we would typically be seeing but we aren't seeing it right now. We have to balance that with services we can offer our local community against the revenues being generated and not being generated. (Participant B).

Three of the participants did not have financial concerns derived from the COVID-19 pandemic. Participant H mentioned that the minimal financial impacts to the local government was due to the size of their community. They discussed,

Because we are smaller, we didn't have the same level of negative impact from COVID on our business. As an example, we do not offer any recreation programming in our community, we don't have a ton of amenities that we need to think about closing or reopening, we don't have libraries, so for us, we had minimal impact in terms of our annual revenue because we didn't really lose any. The only revenue we really get is from property tax. (Participant H).

Participant I explained how there were not any significant financial impacts for their department specifically, but there were concerns about the perception of the misuse of finances to the public. They said,

Fortunately for us financially we were not as hard hit as other communities. The fire department had hiring last year, and we decided to go ahead with it because it was a part of the strategic plan, but then we know the perception of hiring people in

the middle of the pandemic when people are being laid off and losing their jobs, but our city was still growing rapidly and we needed to make sure we were providing the protection that we were entitled to do, but I think for overall, we were very cautious with this year's budget. We were counting the pandemic, and the loss, and support for local businesses and our own recovery where possible. (Participant I).

Participant D and E explained the financial benefits of sharing an emergency management program. Participant E revealed,

One of the biggest successes we have had with this is the realization that there is an economy of scale here. When we can go to both councils and say you can have this at 50 cents on the dollar, it opens their minds up. That is what they are about. They are conscious of the money they spend, if they can find a way to save money, they are going to do it whether it is impractical or practical. So that was a huge success for us to get us to understand that they can save money while doing this and they have a better program because of it, we are far better off regarding infrastructure and capacity. (Participant E).

Participant G touched on the financial benefits of having a good working relationship with the provincial government. They explained,

I believe that we worked really closely with EMBC and we submitted about \$325,000 and got reimbursed for all of it. We did very well. One of my deputy directors and myself have been embedded in EOCs and the like before so we know what is going to fly on a resource ask and what is not. (Participant G).

Regional Location

All participants were asked about how the regional location of their municipality impacted their pandemic planning and response. The participants discussed the geographical position, population demographics, and population density in each of their respective municipalities.

Geographical Position

The participants indicated that their geographical position created unique challenges and opportunities to respond to the COVID-19 pandemic. Participant B referred to their geographical position as an “island of 100,000” people surrounded by smaller municipalities. The participant explained that their position influenced the development of their business continuity plan with respect to their water treatment facilities. Since their water treatment facility is more complex than the facilities in the surrounding municipalities the local government contemplated finding operators internationally who could run the facility if the current operators were unable to perform their duties. The participant explained: “regionally, other small municipalities could

help each other but our system is state of the art, totally one of a kind, so we couldn't send our people away and nobody could just come in and do the job.”

In contrast, Participant G claimed that their geographical position was not a significant issue for the local government but presented an interesting policy opportunity to assist with the delivery of critical goods. They explained,

At first, we had this big parking lot set up, it was roped off with security, had all these types of porta-potties and the whole nine yards. There would only be one truck there and I thought it would be a colossal fail. But it took a week for the trucking industry to know about it and then they would come in and it would be full. It took a while, but it ended up being quite successful and well appreciated. (Participant G).

Two participants discussed advantages and disadvantages of living in a village municipality. Participant H indicated,

We lacked the ability to provide the support that we wanted to for our residents because we didn't have anywhere where people could come get their COVID tests done, their vaccines done, or anything we can offer for vaccination clinics. The fact that we are such a small rural community next to a big metro hub it is sort of two sides of a coin. One, we feel like we would like to offer these benefits to our residents but on the flip side we are really happy that we are so close to be able to send our residents elsewhere to get the services they need. (Participant H).

Similarly, Participant F described their regional location as small and remote which was highlighted as a concern during the pandemic planning process. They mentioned “as a small remote community with very limited health care services, a major concern was the capacity of the community and the local clinic to treat COVID patients. Even a small community outbreak could easily overwhelm a local clinic.”

Population Demographics

Many participants (6/10) indicated that there was concern about how the COVID-19 pandemic would impact the vulnerable populations, specifically the senior population.

Participant D referred to their municipality as small with a large senior population. The participant expressed concerns about the impact COVID-19 would have on the community if it began to rampantly spread. The participant spoke,

We have a very senior demographic, and they are very active, so they are out, so if it did land here, we thought it was going to spread rapidly. We are very lucky, we hear about the odd case, but besides that it didn't really change. (Participant D).

Participant E echoed similar concerns, they exclaimed,

We were scared to death, we have the oldest population in Canada, we thought we were truly going to be ‘God’s waiting room’ for a lot of people and it was a very scary thought. We got a very high vaccination rate now and that is great, and the elderly population is taking this thing seriously. From my perspective I thought things might have ended badly if it had been different. (Participant E).

In contrast, Participant I discussed how the local government’s preparation to support the vulnerable population yielded surprising results. They explained

We have a pretty small homeless population, and it is very transient... early on we were working with our local food bank anticipating it was going to get slammed, we diverted money to them, we brought in tents and ESS [emergency support services] staff to manage their first food bank and get them all the PPE [personal protective equipment] they needed and then we noticed that no one was there. There was actually a reduction in use of the food bank ironically. (Participant I).

Population Density

Some participants (3/10) indicated that their population density impacted their response to the pandemic. Participant A described their regional location as an urban area with primarily multi-family dwellings that house a relatively young population. The participant noted that their regional location impacted some of their response policy decisions. They stated,

We have probably 80-90% of our residents living in multi-family buildings, so it is a very small percentage of single-family neighbourhoods. That is why our council focused on supporting activities in our outdoor places...so people could get out of their apartments and have somewhere to go. (Participant A).

Similarly, Participant C identified their regional location as population dense and centralized within their regional health authority. The participant indicated that their regional location had both benefits and consequences. They mentioned,

I think there is a strength since our geographical area isn’t so big that our services can be concentrated, but then there is the other challenge that with the population being so dense, especially in our parks where it became an opportunity for people to go out, it was a lot of people in the parks that we were not expecting which led to extra cleaning and maintenance. (Participant C).

5.2 Summary

The findings demonstrate the similarities and differences between each local government in B.C. in regard to planning and responding to the COVID-19 pandemic. The presence and

usefulness of an existing pandemic plan varied among local governments. Although some local governments had a plan that influenced their response efforts, most local governments did not have a plan or one that would help with the development of response policies. As the interviews continued, it became evident that the participants found specific elements critical to planning and responding to the pandemic emergency (e.g., collaboration, communication, staff, etc.). However, the experiences with incorporating these elements into their planning and response framework varied. For example, most local governments emphasized the importance of collaboration, but less than half of the participants collaborated with community stakeholders. These variances will be discussed further in the next chapter.

5.3 Revisiting the Conceptual Framework

The conceptual framework (see Figure 1) for this thesis study identified prominent themes related to pandemic planning and response found in the literature review that influenced the research design of the study. Some of these concepts were reiterated by participants to the same extent as mentioned in the literature review (i.e., the importance of communication and collaboration was equally discussed in both the literature review and the interviews). Other concepts, such as the role of local governments within the emergency management framework and emergency training and exercises, were less discussed among participants during the interviews. The most unanticipated deviation from the conceptual framework was the creation of a new concept derived from the interviews – the impacts on staff during the COVID-19 pandemic. Figure 2 below exhibits the revised conceptual framework. These concepts will be elaborated on further in the next chapter.

Figure 2

Revised Conceptual Framework

Research Questions

How did pandemic planning documents influence how local governments responded to the COVID-19 pandemic?

What is the current state of pandemic planning and response?

What worked well/did not work well related to pandemic planning and response?

What improvements could be made to pandemic planning and response?

Are there any differences based on the regional location of a municipality?

Literature Review

State of Existing Plans:
current state of existing plans and recommendations in improvement

Collaboration: includes regional, intergovernmental, and community collaboration

Regional Location: rural vs. urban location / small vs large population

Role of Elected Officials:
level of involvement and influence of elected officials

Communication: includes communication plans and community, intergovernmental, and internal communication strategies

Digital Infrastructure:
current state and importance of this type of infrastructure during a pandemic

Public Risk Reception:
influence of public risk perception on compliance of policies

Financial Impacts: includes fiscal strategies during the pandemic and types of local economic aid

Staff Impacts: includes staff safety, layoffs, training, and capacity

Chapter 6: Discussion and Analysis

6.1 Introduction

This thesis aims to gain a greater understanding of how pandemic planning documents influence how local governments in B.C. responded to the COVID-19 pandemic. The current state of pandemic planning, which will be discussed further below, suggests that pandemic planning documents are not viewed as critical to the successful implementation of policies since many participants believed that their response was successful without them. However, those participants who had comprehensive planning documents felt more confident and organized in their response decisions.

This chapter will further elaborate on the significance of the main themes identified in the findings chapter of this thesis. These themes are collaboration, communication, staff impacts, digital infrastructure, and financial impacts. The discussion of these themes will also highlight what the participants believed worked well and did not work well when planning and responding to the COVID-19 pandemic. This chapter will conclude with a discussion of how the regional location of each local government impacted preparedness and response policy decisions.

Current State

The current state of emergency management planning in local governments in B.C. favours planning for natural disaster emergencies rather than pandemic emergencies. All of the participants indicated that they had emergency plans for natural disasters, specifically natural disasters with a greater likelihood of occurring and having significant consequences to that community. This approach is consistent with hazard, risk, and vulnerability analysis (HRVA), which is rooted in making risk-based decisions to address vulnerabilities, mitigate hazards, and prepare for emergency events (Emergency Management BC, 2020). The HRVA model is recommended to local emergency planning departments by the Government of B.C., which may explain the reference of this model by some participants (Emergency Management BC, 2020).

Even though most participants had pandemic planning documents, only some documents were considered useful by participants when responding to the COVID-19 pandemic. Participants who were confident in their existing pandemic plan used the same HRVA approach they used when planning for a natural disaster emergency. In contrast, participants who felt that their existing pandemic planning documents were inadequate indicated that their plans were centred around responding to the SARS pandemic from 2002 to 2004. Not only did these plans contain nuances specific to that virus, but it also ignored the advancements in digital information sharing and surveillance as well as medical technologies that were widely available two decades later.

Previous research on local government pandemic planning (French, 2011; Hu et al., 2007) found that there were discrepancies in planning documents between local governments which is

consistent among the participants of this study. The use of a broad, flexible pandemic plan that addresses community-specific risks is also consistent with the recommendations made by previous literature (Azziz-Baumgartner et al., 2009; French, 2011; Hu et al., 2007; Nicoll et al., 2012), which can be achieved using the HRVA model. Hu et al. (2007) have suggested that the pandemic planning gap between local governments could be addressed by increased government regulation mandating emergency planning. However, it is important to note that the local government framework in B.C. is based on “autonomy, empowerment, and accountability,” which suggests that the Government of B.C. may not support a policy that requires increased provincial government intervention (Government of British Columbia, 2022).

The participants from local governments with up-to-date pandemic preparedness and response documents that adhered to the HRVA model felt more prepared to respond to the COVID-19 pandemic. But, none of the participants in this study felt that their response was unsuccessful or that not having an extensive pandemic plan greatly hindered their policy decisions. This finding suggests that pandemic planning may not be necessary to respond to a pandemic emergency but can immensely improve the delivery of response policies and the confidence of staff.

It is important to note that this current state analysis is limited by the group of participants selected for this study and that potential participants from local governments who may have struggled during the pandemic may be less likely to participate in a study that would reflect poorly on them and their local government. This limitation may have led to a disproportionate number of participants with local governments who successfully responded to the COVID-19 pandemic.

6.2 Main Themes

Collaboration

An emergency, especially a global pandemic emergency, impacts a variety of entities. Collaboration among these entities can bolster planning and response efforts when a proper approach is employed by local governments. The participants indicated that successful collaboration was achieved through engaging in regional collaboration prior to and during the COVID-19 pandemic, maintaining a positive and ongoing relationship with the provincial government, utilizing elected officials in definitive roles, collaborating between departments within their local government, and gaining valuable information from community members (when participating in active public engagement). There were also some challenges that emerged when participants discussed their collaborative efforts. These challenges include miscommunication and barriers to collaboration with the provincial government and minimal collaboration with community members practiced by local governments during the COVID-19 pandemic.

Almost all participants indicated that they had collaborated with neighbouring local governments by sharing emergency departments and planning documents as well as through the creation of regional working groups or committees. Many of these partnerships were established prior to the COVID-19 pandemic, which helps mitigate potential challenges that may arise with forming these agreements in tandem with developing response policies to address immediate risks. Previous research (Danforth et al., 2010; Somers & Svara, 2009; Switzer et al., 2020) encourages this type of regional collaboration but indicates that there may be challenges in establishing these types of partnerships before the onset of an emergency. The participants did not identify any issues with establishing these groups beforehand, as many of them had these partnerships to address ongoing regional issues, which were then modified to focus on pandemic-related issues. The participants also emphasized that regional collaboration at the local government level may be the easiest form of collaboration since local governments have similar interests and mutually benefit by sharing planning and response information. These findings suggest that local governments in B.C. value regional collaboration and have existing infrastructure to support this collaboration prior to and during an emergency.

Many participants indicated that there were advantages to working collaboratively with the provincial government, but this type of collaboration was more difficult to maintain. Existing literature (Somers & Svara, 2009; Yilmaz & Boex, 2021) suggests that intergovernmental collaboration requires balancing intervention from the higher level of government and empowering the local government to act as required to respond to the emergency effectively. Participants who indicated that they had a positive relationship with the provincial government indicated that they balanced the provincial government's interests with their own government's interests and projects worked best when the local government took the initiative. However, this balance was more difficult for other participants. Some participants, when acting in the best interest of their community, overstepped from the provincial government's perspective causing difficulties with collaboration. This overstepping does not only happen with local governments but can also occur in higher-level governments intervening in an emergency without input from the local government (Somers & Svara, 2009; Yilmaz & Boex, 2021). These findings suggest that working with higher-level governments can have a positive impact on an emergency response, but the relationship requires more work than collaborating with other entities.

Elected officials are a necessary component of the local government framework and have an influence over pandemic planning and response efforts. The participants emphasized the importance of clarifying the role of the elected official to ensure that they impact policy direction but do not affect the day-to-day operations of emergency management staff. Kirilin's (2020) study suggests that increased involvement from elected officials will improve a pandemic response. But, according to participants, elected officials are most beneficial when they provide support to emergency management staff and reach out to community members to identify problems in the municipality. Some participants indicated that their pandemic response was negatively affected when elected officials tried to insert themselves into other emergency

management positions. Existing research on the role of elected officials (Henstra, 2010; Somers & Svara, 2009) also reiterates the importance of providing support to emergency management staff; however, the literature focuses more on financial support rather than emotional support identified by participants. The shift in focus from financial to emotional support may be due to the increased emphasis on staff safety and wellbeing by participants, which is discussed later in this chapter. Overall, these findings suggest that collaborating with elected officials is necessary to foster the support needed to adequately respond to a pandemic emergency; however, having elected officials overstep their role can make it more difficult to execute this response.

Previous literature (Braunack-Mayer et al., 2010; Danforth et al., 2010; Doxtator et al., 2004; French, 2011; Rogers et al., 2009) emphasizes the importance and value of collaborating with community members during the planning and response stages of a pandemic emergency. However, less than half of the participants mentioned that they employed this level of collaboration during the COVID-19 pandemic. Participants who did include community members in their response efforts spoke directly about the benefits that came from these interactions and how the information was used to influence response policies. This gap between the literature and the findings of this study may be explained by the level of effort and resources required to conduct this level of collaboration. For example, one participant indicated that they had staff members whose sole positions were to contact community members and record what programs or information they needed through the COVID-19 pandemic. Since local governments vary in physical and financial capacities (Harris et al., 2011; Kusumasari et al., 2010; Ollerenshaw et al., 2016), this level of collaboration may be the most difficult to achieve for some local governments.

An area of collaboration not widely discussed in previous literature, but identified by most participants, is collaborating between departments within a local government. Many participants indicated that pandemic planning documents and response policies were shared between departments so that all staff was aware of any new procedures and policies related to the pandemic emergency. The lack of literature regarding emergency planning and local government staff is discussed later in this chapter and suggests that a focus on planning and policy outcomes, in addition to the lack of qualitative research with staff, may be the reason for this gap.

In sum, collaboration was viewed by participants as an integral component of pandemic planning and response but collaborating with some entities is easier than others. Internal collaboration between departments within a local government and regional collaboration with other local governments was easier than collaborating with the provincial government, elected officials, and community members. The best practices to improve collaborative efforts would be to start collaborating prior to an emergency, define each entity's role in collaboration, and recognize that collaboration requires balancing the needs of the local government and the needs of the collaborative partner.

Communication

Clear and consistent communication is vital to a local government pandemic response. Participants indicated that they found success communicating with individuals in different departments within their local government and using multiple modes of communication to reach community members. Despite these successes, there were some challenges regarding communication. These challenges include communicating with higher levels of government, communicating pandemic severity to community members and staff, and a lack of discussion around the use of communication plans by participants.

Many participants emphasized the importance of communicating their pandemic plans and policies within their local government. Communicating this information keeps the entire organization informed and aware of how the pandemic affects them and their work. Some of the methods used by participants include weekly phone calls, briefing department leaders, and posting plans and policies online. None of these participants indicated that this type of communication with the staff was challenging but still important to their overall response.

Communication strategies between staff in a local government are understudied. Only one participant from one study (Dzigbede et al., 2020) discussed the value of this type of communication. According to this study, successful communication among staff can lead to better communication with the public. Some reasons for the lack of literature on this area may be the belief that this type of communication will occur naturally, and since staff do not find this form of communication challenging, there does not need to be any further research. However, if this type of communication can lead to improved communication chains with other entities, more research should be done on how internal communication strategies can be used to reach those entities.

The participants and previous literature (Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Liu & Saltman, 2020; Nicoll et al., 2012; Rogers et al., 2009) both believe that multiple modes of communication are the best method to relay important information to the public. Some methods used by participants included social media, newspapers, television segments, digital newsletters, webpages, phone call check-ins with residents, radio campaigns, and pop-up information centres throughout the community. Almost all participants received positive feedback from their residents, who have requested that this level of communication continue to occur beyond the pandemic emergency. The continuance of this type of communication may provide opportunities for more collaboration and public engagement during the preparedness stage of the next pandemic emergency.

Most participants found communicating with higher levels of government was the most challenging form of communication during the COVID-19 pandemic. These challenges included receiving minimal to no information on the policy direction of higher-level governments, which caused local governments to act independently, obtaining conflicting information from different

sources within those governments, and implementing policy initiatives based on information from these governments, which caused negative public discourse.

Previous literature (Danforth et al., 2010; Liu & Saltman, 2020) indicates that this type of communication is difficult and, when poorly executed, can cause serious ramifications such as exacerbating the spread of the virus or ignoring requests for assistance. The issues described by the participants suggest that communication errors were made by the higher-level governments rather than the local governments themselves. Higher-level governments must manage larger jurisdictions and coordinate with more staff than a local government which can make it difficult for them to maintain communications with multiple local governments synchronously. However, given the impact that their information and policy directions can have on local governments, it is important that higher-level governments work with local governments prior to the next pandemic emergency to establish a communication strategy that benefits both parties.

Some participants had difficulties communicating pandemic severity to staff and the public throughout various stages of the COVID-19 pandemic. At the onset of the pandemic emergency, participants had difficulties convincing senior staff and elected officials to begin developing policies to address the emergency. As safety policies and procedures became required in the local government workplace, participants had to convince their staff about the importance of adhering to these new procedures for their health and safety. As the pandemic emergency continued, participants felt that both their staff and the public became more apathetic to these policies.

Assessing pandemic severity is directly linked to individual risk perception. Risk perception becomes a more pressing issue during a pandemic emergency because during a natural disaster emergency, infrastructure damage can be easily viewed and assessed by the masses, whereas the damage of a virus is more discrete. Past research (Braunack-Mayer et al., 2010; Hughes et al., 2022; Somers & Svara, 2009) has found that a higher risk perception leads to greater compliance with public health and safety measures.

Public communication of pandemic severity has recently shifted due to the modes of communication changing from traditional platforms (e.g., newspapers) to new platforms (social media) (Hughes et al., 2022; Liu et al., 2021). The public can now receive information from various sources in excess, which can negatively impact risk perception (Hughes et al., 2022; Liu et al., 2021). These authors (Hughes et al., 2022; Liu et al., 2021) recommend that local governments utilize social media platforms to distribute information on pandemic severity, which most participants did during the pandemic emergency. However, the participants still had challenges increasing risk perception. Further research should be done on how public risk perception can be increased so governments can successfully communicate pandemic severity to their citizens.

A significant focus in previous literature on the value of communication throughout a pandemic emergency is the presence of an in-depth and evolving communication plan (Azziz-Baumgartner et al., 2009; Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Nicoll et al., 2012). However, only two participants in this study mentioned the significance of their communication plan when responding to the COVID-19 pandemic. There are some possible explanations for this discrepancy.

First, participants were not explicitly asked if they had a pandemic communication plan; instead, they were asked what types of existing and new plans they had to respond to the ongoing pandemic. However, the lack of reference to these plans, even when asked generically, suggests that they may not be considered useful or of great importance to the participants. The participants who did mention their communication plans had recently updated these plans prior to the pandemic emergency, so they may have been thinking about it when asked about their plans during the interview.

Second, communication plans are designed to help communicate important information to community members and to establish accessible communication chains (Danforth et al., 2010; Dzigbede et al., 2020; French, 2011; Nicoll et al., 2012). As discussed previously, participants felt that they did not have any issues regarding their communication chain with community members and internal staff. This finding suggests that these local governments may not have needed a communication plan to effectively respond. However, it is important to note that challenges such as communication issues with higher levels of government may have been improved with the establishment of a communication plan.

To conclude, communication, both internally and externally, is foundational to successful pandemic planning and response. Similar to collaboration, participants found communicating with staff members between departments the most successful but communicating with higher levels of government was the most challenging. The participants found success in using multiple modes of communication to reach the public but struggled with harnessing those modes to further communicate pandemic severity. These local governments may benefit from the development of a communication plan that focuses on the areas that participants found the most challenging during the response stage (i.e., communicating with higher levels of government, communicating pandemic severity).

Staff Impacts

Although local government staff are only periodically mentioned in the literature, nearly all participants discussed the impact their staff had on pandemic planning and response to the COVID-19 pandemic. The impact of local government staff during the pandemic planning and response stage may be understudied for two reasons. First, most emergency planning and response literature (Afonso, 2021; Azziz-Baumgartner et al., 2009; Col, 2007; French, 2011; French & Raymond, 2009; Henstra, 2010; Hu et al., 2007; Maher et al., 2020; Nicoll et al., 2012;

Wilson et al., 2020) focuses on the product or outcome created by the staff (e.g., quality of emergency plans) rather than the experiences of staff (e.g., staff familiarity with emergency plans). Second, emergency planning and response literature that employs qualitative research methods (Braunack-Mayer et al., 2010; Doxtator et al., 2004; Rogers et al., 2009) uses local government elected officials and members of the public instead of government staff members as participants.

Despite being understudied, the participants provided positive and negative impacts on staff while planning and responding to the COVID-19 pandemic. The participants indicated that their staff benefited from an increased awareness of staff safety during the pandemic, the reassignment of staff to minimize the impact of layoffs, and emergency-related training prior to and during the pandemic response. Despite these successes, some staff experienced unavoidable layoffs and the negative impacts of constraints on staff capacity.

The majority of participants indicated that staff safety was an utmost priority during the COVID-19 pandemic. Staff safety includes creating and enforcing workplace safety policies aimed at preventing the spread of the virus, which at times was challenging for some participants since staff was sometimes reluctant to adhere to these new policies. Staff safety also includes advocating for the well-being of staff to elected officials to prevent staff burnout. In existing literature (Afonso, 2021; Azziz-Baumgartner et al., 2009; French, 2011; Maher et al., 2020; Nicoll et al., 2012; Wilson et al., 2020), staff safety is typically viewed as a variable to consider when planning (e.g., maintaining local government operations if a set number of staff members become infected). Since staff have a significant role in the creation and delivery of pandemic planning and response policies, there should be research done on what impacts staff safety has on these policy outcomes.

Almost all participants indicated that there were considerations regarding staff layoffs. Some of the larger local governments laid off staff primarily from the parks and recreation departments since that service was limited due to response policies such as facility closures. Most participants indicated that they were able to repurpose full-time staff into emergency-related roles (e.g., EOC support roles, health order enforcement roles) to prevent the impact of staff layoffs. Previous research (Afonso, 2021; Maher et al., 2020) found that when local governments are facing financial hardships due to a pandemic emergency, they are unlikely to employ staff layoffs as a financial strategy unless necessary. According to this research (Afonso, 2021; Maher et al., 2020), one of the most popular financial strategies regarding staffing during a pandemic emergency was to institute hiring freezes rather than lay off existing staff. This research supports the findings of this study, as the majority of local governments were able to prevent layoffs where possible.

Both participants and existing natural disaster emergency planning literature (Harris et al., 2011; Henstra, 2010; Kusumasari et al., 2010; Sinclair et al., 2012; Somers & Svara, 2009) agree that emergency training has a positive impact on planning and response efforts. The existing

literature on pandemic emergency training (Doxtator et al., 2004; MacIntyre et al., 2021) focuses on conducting exercises on an existing pandemic plan, whereas participants indicated that their training involved educating staff on their roles within the emergency management framework. The participants who conducted training agreed that all local government staff should have some level of this training and that the training improved their response efforts.

Almost all of the participants indicated that they lacked the staff capacity to manage the COVID-19 pandemic. Human resource is one of the key functional success factors for local governments when addressing an emergency (Henstra, 2010; Kusumasari et al., 2010; Ollerenshaw et al., 2016). Financial and physical constraints exacerbated by the pandemic make procuring human resources more difficult. Some participants assigned existing staff additional roles, while others used outside resources, such as university students, to assist with planning and response work. There were contrasting views on whether having fewer operational locations (e.g., fire stations, public works yards) was beneficial to planning and response. Some participants felt that having only one operational location meant that if someone became infected with COVID-19, the whole location would have to close, which could cause serious service disruptions. In comparison, other participants felt that having one operational location meant that it was easier to implement and monitor new health and safety policies and orchestrate a facility closure if necessary, which contributes to ensuring staff safety. These findings suggest that how local governments choose to manage limited staff capacity widely varies. Therefore, further research should be done on what influences the decisions made by these governments.

The participants of this thesis study expressed concern over the impacts on their staff during the COVID-19 pandemic. The level of information provided by the participants was unexpected, considering the lack of previous literature on staff impacts. The participants minimized the negative staff impacts during the pandemic emergency by increasing awareness of staff wellbeing, protecting staff through safety policies, avoiding layoffs where possible, and providing training to staff members. The challenges regarding staff impacts (unavoidable staff layoffs and capacity constraints) were ultimately not in the control of the participants, but rather a consequence of the fiscal constraints local governments operate under within B.C., even during periods where there is no emergency.

Digital Infrastructure

Digital infrastructure is a vital component in pandemic planning and response. Some participants struggled with implementing digital infrastructure at the onset of the pandemic, especially if the concept had not been considered prior to the emergency. However, once implemented, participants felt that new digital policies and services had an increased benefit on local government staff and the public.

Transitioning to digital infrastructure in a local government setting was challenging for a few participants. For example, local governments had to purchase additional equipment (e.g.,

laptops, tablets), increase bandwidth capabilities to support an influx of users, and train local government staff and council members to use the new infrastructure. The participants indicated that this process was slow and difficult at the beginning but improved over time. Previous literature (Dzigbede et al., 2020; Kirilin, 2020; Webster, 2020) suggests that addressing digital infrastructure inefficiencies prior to a pandemic emergency leads to a better response overall. Although these local governments now have the technology in place to manage digital services during a pandemic emergency, more work should be done prior to the next pandemic emergency to ensure that the digital infrastructure remains up to date with new technological advancements.

During the pandemic, local governments implemented new digital policies and services to maintain operations and remain accountable to the public. Some of these new policies include permitting staff to work remotely, streaming council meetings online to the public, conducting building inspections through video call, submitting building and development plans on an online platform, and accepting online payments for money owed to the local government. Many of these participants expressed that they want many of these digital services to be functional beyond the pandemic emergency. Local governments should continually evaluate the benefit of these services as it transitions back to standard operation procedures post-pandemic.

Financial Impacts

Many participants discussed how the COVID-19 pandemic affected their local governments financially; however, some of these governments were affected more than others. Some participants felt that governing a smaller community minimized some of the negative financial impacts experienced by larger local governments. For example, many small communities do not have the level of amenities and recreational programming that is found in a larger community. Participants who felt increasing fiscal strain from the pandemic indicated that they lost revenue from public amenities (e.g., recreation facilities) and tourism. It is important to note that ongoing revenue loss is more common during a pandemic emergency than during a natural disaster emergency (Alfonso, 2021; Dzigbede et al., 2020; Maher et al., 2020; Switzer et al., 2020).

All of these local governments employed financial strategies to decrease negative impacts on governance and service delivery. Some of these strategies include collaborating with other governments (both at the local and provincial level), revisiting strategic and financial plans to reprioritize budget items, implementing hiring freezes, and halting capital projects where necessary. These decisions are consistent with previous research done on financial strategies employed by local governments during a pandemic emergency (Afonso, 2021; Maher et al., 2020; Switzer et al., 2020).

Previous literature (Dzigbede et al., 2020; Wilson et al., 2020) also discussed local governments providing financial support to their local economy during a pandemic emergency. However, none of the participants indicated providing financial support, but many did provide

other forms of support through promotional campaigns for local businesses and including business stakeholders in emergency planning and decision-making. Overall, all of these participants felt that their local government successfully managed the financial challenges to the best of its abilities.

Regional Location

The participants discussed the regional location of their local government in terms of geographical position, population demographics, and population density. Their comprehensive interpretation of the term regional location made the discussion around its influence on pandemic planning and response more distinct and complex.

Some previous studies (Armstrong & Lucas, 2020; Danforth et al., 2010) suggest that smaller rural communities may be less affected by a pandemic emergency since a lower population density can cause lower virus transmission rates. However, all the participants agreed that their regional location created different challenges and policy opportunities that influenced their pandemic planning and response decisions regardless of being considered a rural or urban community.

Some local governments with greater population densities focused on policies that brought people outdoors where they could safely adhere to social distancing policies (e.g., permitting alcohol consumption in public green spaces). In comparison, a small remote local government with a low population density focused on bolstering its limited local healthcare providers with supplies in preparation for a potential outbreak. Rather than providing additional health services, a different small local government was able to advertise and provide information to community members about the healthcare services available in an adjacent, more populous community.

Many local governments provide specialized services to their vulnerable population (e.g., senior citizens, houseless populations). One local government indicated that at the beginning of the pandemic, they increased food bank capacity, even though they had fewer houseless individuals when compared to neighbouring communities. They found that these services were not being accessed to the level they anticipated and required adjustments as the pandemic continued to better suit community needs.

Some local governments had to consider their geographical position when preparing plans and developing response policies during the COVID-19 pandemic. When one participant was preparing a business continuity plan, they determined that mutual aid agreements with surrounding municipalities regarding water treatment facilities would not be feasible since their system was larger and more complex than the facilities in neighbouring communities. This issue emerged because their local government was much larger than any of the surrounding communities. Another participant indicated that being located on a widely traveled highway caused their local government to implement policies catering to the essential service workers who had to travel along this route to deliver supplies.

These findings demonstrate that rural communities may not be less challenged than urban communities; rather, each community has unique challenges based on different combinations of factors that constitute its regional location. Additional policy considerations based on regional location are unlikely to be the same as in other municipalities across B.C. Further research on regional location would benefit from a larger sample size to better understand how the different combinations of geographical position, population demographics, and population density create similar or different policy considerations when preparing pandemic planning documents and response policies in B.C.

6.3 Summary

The current state of pandemic planning in local governments in B.C. suggests that this type of emergency planning is not prioritized by most local governments, especially when compared to planning for a natural disaster. However, all participants viewed their responses to the COVID-19 pandemic as successful despite the varying degrees of planning involved. The participants also identified what aspects of planning and response worked well and did not work well for their local governments and found that there were much more successful policy choices than unsuccessful or challenging ones. Some of these successful choices include establishing regional collaboration networks before the pandemic, collaborating and communicating with staff within the local governments, increased awareness of staff safety, training, and wellbeing during the emergency, benefits from using digital infrastructure for service delivery, and employing various financial strategies to mitigate the negative fiscal impacts of the emergency. Some of the unsuccessful or challenging policy choices include barriers to communication and collaboration with higher levels of government, minimal collaboration with community members, difficulties communicating pandemic severity to staff and community, a lack of discussion around the value of a communication plan, constraints to staff capacity, and difficulty implementing digital infrastructure at the onset of the pandemic. Lastly, the discussion with participants about regional location demonstrates the unique policy opportunities and challenges that can arise when considering the different combinations of factors that comprise the regional location of a municipality. These insights inform the recommendations for local governments when looking toward future pandemic emergencies in the next chapter.

6.4 Limitations of Analysis & Further Research

Throughout the discussion and analysis, limitations and recommendations for further research emerged in relation to the concepts identified in the findings. A conclusive understanding of the current state of pandemic planning and response in B.C. may be limited by participant selection. Participants from local governments who found pandemic planning and response more challenging may have been less likely to volunteer to participate in this study. This circumstance may have contributed to the finding that all participants indicated that their response efforts were successful and not hindered by the lack of a comprehensive pandemic plan.

Many of the concepts discussed can be elaborated upon in further research studies. Some future studies may include the transcendence of internal communication strategies to improve communication chains with higher-level governments, the ability of local governments to influence public risk perception to successfully communicate pandemic severity to the public, and the impact that staff safety measures have on the creation and delivery of pandemic planning and response policies.

Chapter 7: Recommendations & Conclusion

7.1 Introduction

This thesis sought to increase understanding of how local governments in B.C. used pandemic planning documents to develop policies in response to the COVID-19 pandemic. The findings and analysis demonstrate that despite the varying levels of pandemic planning completed prior to the pandemic emergency, nearly all participants believed that their response policies successfully met the intended policy outcome – to minimize the spread of the virus and protect the community. The next section will synthesize the findings and analysis into a set of recommendations for local governments on how to improve pandemic planning and response policies for future pandemic emergencies.

7.2 Recommendations

The following recommendations are based on the interview findings and analysis. The recommendations are directed at emergency management staff and the local governments.

Recommendation 1 – Develop a flexible pandemic plan using the HRVA model promoted by the Government of B.C.

Although all participants indicated that their local government’s response to the COVID-19 pandemic was successful overall, many of the participants without an existing flexible pandemic plan felt that policy implementation at the onset of the pandemic emergency was challenging. Participants from local governments with pandemic plans following the HRVA model indicated that they and their staff felt confident delivering response policies based on the steps outlined in their plan. The Government of B.C. has various guides published regarding the use of the HRVA model targeted at local government emergency departments (Emergency Management BC, 2020). These resources may be helpful for local governments who need to update their pandemic plan before future emergencies.

Some key challenges to this recommendation would include the limited financial and staff resources provided to emergency management departments and staff unfamiliarity to the HRVA model. The best way to mitigate these challenges would be to start developing a new pandemic plan during the pandemic emergency, since there will likely be increased attention and resources provided to emergency management to address this problem. The Government of B.C. also provides various grants and free training sessions on emergency management topics and activities that can help teach staff on the HRVA model as well as other important areas to help planning and response efforts (Government of British Columbia, 2022d).

Recommendation 2 – Establish collaborative networks with community stakeholders and higher levels of government prior to the next pandemic emergency.

All participants indicated that collaboration with other entities was necessary to plan and respond to the COVID-19 pandemic. Most participants identified little to no challenges collaborating with neighbouring local governments or staff within their local government. Many of these collaboration networks had been established prior to the pandemic (e.g., monthly meetings with mayors from different local governments to discuss region-specific issues transformed into weekly meetings to discuss pandemic policies). This type of collaboration was not as frequent with higher levels of government and community members. Local governments should consider the methods used to create regional and internal collaborative networks and evaluate how these approaches can work with entities that were challenging to collaborate with during the COVID-19 pandemic. Once these methods are understood, relationship-building and networking with these entities should begin as soon as possible to prepare for the next emergency.

Two barriers to this recommendation would be the time required to build strong relationships and creating a beneficial collaborative network with larger entities like the federal government and community members. Since building relationships takes time, it is important to begin making connections outside of an emergency. Collaboration should not be limited to emergency management projects, as many local governments indicated that their best collaboration efforts were derived from existing networks used for different policy issues. Local governments should begin this collaboration on an area that is currently affecting both entities to begin forming those relationships. With regards to collaborating with larger entities, local governments should begin establishing networks with smaller subgroups within these entities, and then expanding. For example, local governments may want to prioritize building relationships with associations that assist the vulnerable population since they are often impacted the most from an emergency and can be difficult to contact. This approach may be more beneficial than a general public engagement strategy on emergency planning and response.

Recommendation 3 – Create a communication strategy and plan with higher levels of government prior to the next pandemic emergency.

Similar to Recommendation 2, it is suggested that local governments consider developing a communication strategy and plan in collaboration with higher levels of government to help mitigate some of the challenges that emerged during the COVID-19 pandemic. These challenges include minimal information sharing from higher levels of government and receiving conflicting information from these governments. A communication plan and strategy that outlines the communication chains and includes an updated list of primary contacts at a staff-to-staff and elected official-to-elected official level can improve information sharing between governments. It is also important to consider the role traditional and social media have in these communication chains, which further exacerbated information inaccuracies, and include this role in the strategies

and plans. Most participants utilized multiple modes of communication to relay information between entities without a concrete communication plan, but it may be beneficial to indicate the modes of communication and their reach to the targeted group.

A few challenges to this recommendation would be establishing and maintaining a consistent communication chain with higher levels of government to create the strategy, and accounting for the role changes of key contacts if they moved to a different department or they terminate their current employment. To address these challenges, it is recommended that local governments first start developing a communication strategy with the provincial government. Due to the provincial government's proximity and oversight of local governments, it is likely that there are existing communication chains that can assist with the strategy development process. Once a communication strategy is developed with the provincial government, the local government will be able to either work collaboratively with the provincial government to establish a communication strategy with the federal government, or at minimum, the local government will have learned what worked and what did not work when creating a communication strategy. To assist with potential key contact turnover, these plans should include more than one contact from each department across multiple departments and be regularly updated.

Recommendation 4 – Regularly review and update the digital infrastructure being used by the local government.

The COVID-19 pandemic demonstrated how necessary digital infrastructure was to continue local government operations. Participants from local governments who had not contemplated how services may be delivered and public accountability may be achieved before the pandemic emergency found it challenging to pivot to implementing and using digital infrastructure to conduct these tasks. Once implemented, many local governments indicated that they would continue operating some services online indefinitely. However, it is important to note that digital technology is always evolving, and the use of this infrastructure needs to be reviewed and updated to reflect the best practices at the time so that when the next pandemic emergency occurs, the transition will be less challenging.

Two barriers to this recommendation would be ensuring someone in the local government possesses knowledge on best technology practices and potential pushback from community members who may resist digital services. Local governments should assign someone to monitor the changes in government digital infrastructure globally to ensure that their government does not lag behind. Depending on fiscal capacity, this role could be achieved through hiring an expert or providing digital education and training to an existing staff member. In some circumstances, community members may be resistant to shifts towards digital service delivery, possibly due to a fear of cyber security threats or the limitation of their access to select services. For example, the increased use of digital infrastructure may negatively impact senior citizens, the houseless population, and rural community members due to limited knowledge and access to

these digital systems. It is recommended that local governments slowly transition to digital services while still providing services in-person before eliminating the delivery method entirely. Local governments should also conduct thorough public engagement and collaborate with non-profit organizations to gain a better understanding of how they can assist their community members with accessing digital services online. Facilitating these changes between pandemic emergencies will help the local government better prepare for a smoother online to ensure public safety, when deemed necessary.

7.3 Final Thoughts

Emergency management is becoming increasingly more significant to local governments in B.C. as the frequency of emergencies continues to rise. Despite the numerous research available on planning and responding to a natural disaster emergency, there is a gap in pandemic planning and response research, especially in the Canadian context. The COVID-19 pandemic created many opportunities and challenges for local governments that required them to make calculated planning and response decisions to minimize the spread of the virus and protect citizens. Although some local governments were better prepared for this type of emergency than others, the majority of local governments were able to effectively respond to the ongoing crisis. As the COVID-19 pandemic continues through the recovery stage, it is important that local governments begin to evaluate the lessons learned from this emergency and prepare for the next one.

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Appendices

Appendix A – Recruitment Script (Email)

Appendix B – Recruitment Script (Telephone)

Appendix C – Participant Consent Form

Appendix D – Interview Questions

Appendix A



**University
of Victoria**

RECRUITMENT SCRIPT (EMAIL)

Hello,

My name is Sarah Greer, and I am a graduate student working under the supervision of Dr. Kimberly Speers in the Public Administration Department at the University of Victoria. As a graduate student I am required to conduct research as part of the requirements for a Master in Public Administration. This research project has been approved by the University of Victoria Human Research Ethics Board (certificate #20-0614) on March 26, 2021.

I am writing to invite you to participate in my research study about COVID-19 pandemic planning and implementation in British Columbia local governments. The purpose of this study is to develop an understanding of how local governments create and utilize preparedness, response, and recovery planning documents in British Columbia during the COVID-19 pandemic. This study also seeks to provide recommendations to local governments on how to improve their preparedness, response, and recovery planning documents for future pandemic emergencies.

You are eligible to be in this study because you are an employee at one of the local governments selected for this study and are believed to have significant experience either working with pandemic planning documents and/or drafting COVID-19 policies when compared to other individuals employed by the same local government. **If you believe that there is someone else employed with the same local government that has more experience and would be able to provide more detailed responses on this topic, you may forward this interview request to that individual or send them my contact information (listed below).**

If you consent to voluntarily participate in this research, your participation will include an interview delivered via Zoom teleconferencing service or by telephone (whichever you prefer). The interviews will be recorded and transcribed and notes may be made by myself throughout each interview. The interview can be arranged at a time and date that works best for both of us. The interview can be completed at any location where there is reliable internet or telephone connection. The interview is expected to be no longer than 45 minutes. At the end of each interview, you will be asked if you are willing to submit digital copies of any pandemic planning documents produced by your local governments that would be relevant to the study. Taking into consideration the interview and the collection of pandemic planning documents you will be expected to provide approximately three hours maximum of your time in total intermittently throughout the study.

If you are interested in participating, please send a signed copy of the attached letter of consent to sgreer@uvic.ca. If you have any questions you may contact me by email (sgreer@uvic.ca) or by telephone (780-679-8048).

Sincerely,

Sarah Greer

Appendix B



**University
of Victoria**

RECRUITMENT SCRIPT (TELEPHONE)

P = Potential Participant; I = Investigator

I: Hello, may I please speak to [name of potential participant]?

P: Hello, [name of potential participant] speaking. How may I help you?

I: My name is Sarah Greer, and I am a graduate student working under the supervision of Dr. Kimberly Speers in the School of Public Administration at the University of Victoria. I had previously sent you an email asking you if you would be willing to participate in my research study about COVID-19 pandemic planning and implementation in British Columbia local governments. I wanted to follow-up via telephone to see if you would be willing to participate in this study or if you required more information before committing to participate in this study?

P: No, I do not want to participate in this study.

I: Thank you for your time, have a nice day.

OR

P: I have read your email and I do want to participate in your study (asks for participant to send a copy of the signed consent form to me and sets a date for an interview).

OR

P: I have read your email and I think someone else would be better for your study.

I: Would you be able to pass on this interview request to them?

OR

P: I am interested in your study, but I would like some more information on the research you will be conducting?

I: Yes of course. What questions do you have regarding this project?

P: What is the purpose of this project?

I: The purpose of this study is to develop an understanding of how local governments utilized preparedness, response, and recovery planning documents in British Columbia during the COVID-19 pandemic. This study also seeks to provide recommendations to local governments on how to improve their preparedness, response, and recovery planning documents for future pandemic emergencies.

P: Why was I chosen for this study?

I: You are eligible to be in this study because you are an employee at one of the local governments selected for this study and are believed to have significant experience either working with pandemic planning documents and/or drafting COVID-19 policies when compared to other individuals employed by the same local government. If you believe that there is someone else employed with the same local government that has more experience and would be able to provide more detailed responses on this topic, you may contact them to share the email and letter of consent I shared with you or ask them to contact me via phone or email.

P: What would I have to do if I agree to participate in this study?

I: If you consent to voluntarily participate in this research, your participation will include an interview delivered via Zoom teleconferencing service or by telephone (whichever you prefer). The interviews will be recorded and transcribed, and notes may be made by myself throughout each interview. The interview can be arranged at a time and date that works best for both of us. The interview can be completed at any location where there is reliable internet or telephone connection. The interview should be less than 45 minutes. At the end of each interview, you will be asked if you are willing to submit digital copies of any pandemic planning documents produced by your local governments that would be relevant to the study. Taking into consideration the interview and the collection of pandemic planning documents you will be expected to provide approximately three hours maximum of your time in total intermittently throughout the study.

P: Thank you for providing me with this information I (would/would not) like to participate in this study.

I: You're welcome, have yourself a nice day.

Appendix C



PARTICIPANT CONSENT FORM

COVID-19 Pandemic Planning and Implementation in British Columbia Local Governments

You are invited to participate in a study entitled “COVID-19 Pandemic Planning and Implementation in British Columbia Local Governments” that is being conducted by Sarah Greer.

Sarah Greer is a graduate student in the Department of Public Administration at the University of Victoria and you may contact her if you have further questions by email (sjgreer@uvic.ca) or telephone (780-679-8048).

As a graduate student, I, Sarah Greer, am required to conduct research as part of the requirements for a Master in Public Administration. It is being conducted under the supervision of Dr. Kimberly Speers, who you may contact by email (kspeers@uvic.ca) or telephone (250-721-8057).

Purpose and Objectives

The purpose of this research project is to develop an understanding of how local governments utilized preparedness, response, and recovery planning documents in British Columbia during the COVID-19 pandemic. This project also seeks to provide recommendations to local governments on how to improve their preparedness, response, and recovery planning documents for future pandemic emergencies.

Importance of this Research

The project addresses the COVID-19 pandemic, which is an ongoing global crisis that has affected all countries and every order of government. Therefore, the research is topically relevant and will contribute to the expanding scope of COVID-19 research. The research will also contribute to the field of Canadian pandemic planning research, which is disproportionately centred around national preparedness plans or public health/hospital preparedness plans. The research may be used by local governments to help prepare for the next inevitable pandemic.

Participants Selection

You are being asked to participate in this study because you are an employee at one of the local governments selected for this study and have significant experience either working with pandemic preparedness plans and/or drafting COVID-19 policies when compared to other individuals employed by

the same local government. This selection evaluation was conducted based on analyzing local government's websites.

What is Involved

If you consent to voluntarily participate in this research, your participation will include an interview delivered via Zoom teleconferencing service or by telephone (whichever you prefer). The interviews will be recorded and transcribed and notes may be made by the investigator throughout each interview. The interview can be arranged at a time and date that works best for both yourself and the investigator. The interview can be completed at any location where there is reliable internet or telephone connection. The interview is expected to take no longer than 45 minutes. At the end of each interview, you will be asked if you are willing to submit digital copies of any pandemic planning documents produced by your local governments that would be relevant to the study. Taking into consideration the interview and the collection of pandemic planning documents you will be expected to provide approximately three hours maximum of your time in total intermittently throughout the study.

Zoom Teleconferencing Service

Zoomer servers are located outside of Canada and Zoom stores users' names and usage data outside of Canada. No other information is stored outside of Canada, and recordings of Zoom meetings are not stored on Zoom servers.

Local Government Approval

You may have to seek permission from your supervisor to participate in this research. If there are established research protocols for your local government, you must go through these protocols. If I, as the researcher, must go through an approval or ethics process with your local government, I must receive the required approval documents before moving forward with the project.

Inconvenience

You will be required to spend approximately three hours maximum of your time to fully partake in the study. This time will be divided into multiple parts, the first part being an interview and the second part being document retrieval. Depending on the length of the interview and the accessibility of the documents, your participation in the study may require more or less time than predicted.

Risks

There are only minimal known or anticipated risks to you by participating in this research.

During your interview, you may be asked to identify issues that occurred throughout the planning and response processes. Your answers may critique employees or internal government systems which if released may cause relationship issues among employees. The project will only reference the local government participants and their answers anonymously to mitigate this risk. No individuals will be mentioned, and attention will be given to not unintentionally identify any positions or individuals.

Some planning documents may not be available to the public. You are under no obligation to share any planning documents that you believe to be classified and may choose to only share documents that are available to the public. You may need to receive permission to share documents and further agreements between you and the researcher may need to take place. This report will be shared publicly and is not a confidential report.

Benefits

There are no direct benefits to yourself by participating in this study however, there may be benefits to society and the state of knowledge. The intention of the project is to provide recommendations to local governments on how improvements may be made to pandemic planning in preparation for the next global pandemic. Therefore, this research could be used by local governments to justify increased (or decreased) attention and resources towards this type of emergency planning depending on the results of the study.

Voluntary Participation

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. After your withdrawal, if you choose to allow the investigator to use the information and data you have previously provided, the protocol outlined in this consent form remains intact. However, if you no longer want your data to be used in this study, all forms of data (ex. recording, notes) will be immediately destroyed and not used in the report.

Anonymity

In terms of protecting your anonymity, I, Sarah Greer, and my supervisor will be the only individuals who will be able to associate your responses to your identity. The dissemination of results will be entirely anonymous.

Confidentiality

Your confidentiality and the confidentiality of the data will be completely protected. All local governments and their corresponding participants will be alphabetized (ex. Local Government A – Participant A, Local Government B – Participant B). Each local government will only be described based on their approximate population and region, and each participant will only be described as their position (ex. Local Government A is located in the Vancouver Island Region and has an approximate population of less than a 1000 people; Participant A is a Chief Administrative Officer). All names and files will be saved and recorded by each alphabetized group. The dissemination of results will also be entirely confidential.

Dissemination of Results

It is anticipated that the results of this study will be shared with others in the following ways: a thesis dissertation (accessible via internet), a published article (accessible via internet), and a copy of the thesis including an executive summary sent directly to the participants.

Disposal of Data

All data will be stored and secured on a USB drive accessible by only myself, Sarah Greer and my supervisor. Only files pertaining to the project will be stored on the USB drive. All data will be destroyed after five years. Since all the data will be stored electronically, the files will be erased at the end of the five-year period.

Contacts

Individuals that may be contacted regarding this study include Sarah Greer and Dr. Kimberly Speers, whose contact information is provided at the beginning of this consent form.

In addition, you may verify the ethical approval of this study or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researcher, and that you consent to participate in this research project.

Name of Participant

Signature

Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.

Appendix D



INTERVIEW QUESTIONS

1. What experience do you have with your local government's planning documents and/or COVID-19 policy implementation?
2. How many other local government employees worked on pandemic planning documents or response policies during the COVID-19 pandemic? What were their positions?
3. What types of emergency plans did your local government have prior to the COVID-19 pandemic?
4. Were there any emergency plans that your local government drafted during the pandemic? What types of plans were they?
5. Have you revised any emergency plans since the beginning of the COVID-19 pandemic? If so, how?
6. Did your local government have any emergency plans created in collaboration with your regional district, another local government, or any other government administration? If yes, what type of plan was created using this method of collaboration?
7. How did the COVID-19 pandemic impact strategic planning in your local government?
8. What were some successes for your local government while drafting and implementing COVID-19 response policies?
9. What were the biggest challenges your local government faced while drafting and implementing COVID-19 response policies?
10. What do you think your local government could have done to better prepare and respond to COVID-19?
11. Do you believe that your local government's regional location had an influence on your pandemic planning or response to COVID-19? If yes, how?
12. Do you believe the population size that your local government serves had an influence on your pandemic planning or response to COVID-19? If yes, how?

13. How did the number of employees and/or council members working for your local government have an influence on your pandemic planning or response to COVID-19?
14. Do you have any local government preparedness, response, or recovery planning documents that you would be willing to share for the purpose of this research? You may need to seek permission before sharing the internal documents.